

Getting Started with ArcGIS Online

Presented to Data Journalism by:
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Outline

- Intro to Esri products and ArcGIS Online
- Your ArcGIS Online account
- ArcGIS Online components
- Preparing your files for ArcGIS Online
- Add Layer
- Attribute Table and other components
- Basemap
- Change style (Symbology)
- Custom configure pop-ups
- Share and print

Esri's ArcGIS Online

- Esri is a corporation that produces GIS software and they are internationally recognized leaders in the GIS industry
- Esri builds ArcGIS one of the most powerful mapping and spatial analytics software and can leverage scripting language such as python
 - ArcGIS Pro, ArcGIS Desktop, ArcGIS Online
- They are solution oriented and they continue to launch software applications that help researchers answer questions using geospatial data
- ArcGIS Online is an online platform that offers mapping, app building, analysis, data collection, and knowledge disseminating capabilities

ArcGIS Online

- Build interactive maps that explain your data and encourage users to explore. Map your own data and gain perspective by adding the authoritative location-based data included in ArcGIS Online. Use smart mapping to guide your data exploration and visualization.
- Cloud-based, you log into ArcGIS Online using a public account or with an organizational account (e.g. Carleton GIS Services)
- The organizational account is a paid subscription and has more analysis capabilities and access to applications and the Esri academy online courses.

Get started with your AGOL account

- <https://library.carleton.ca/find/gis>

Carleton University
MACODRUM LIBRARY

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GIS

Get ArcGIS Software

GIS Help Guides

Contact
GIS Reference
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Access popular datasets

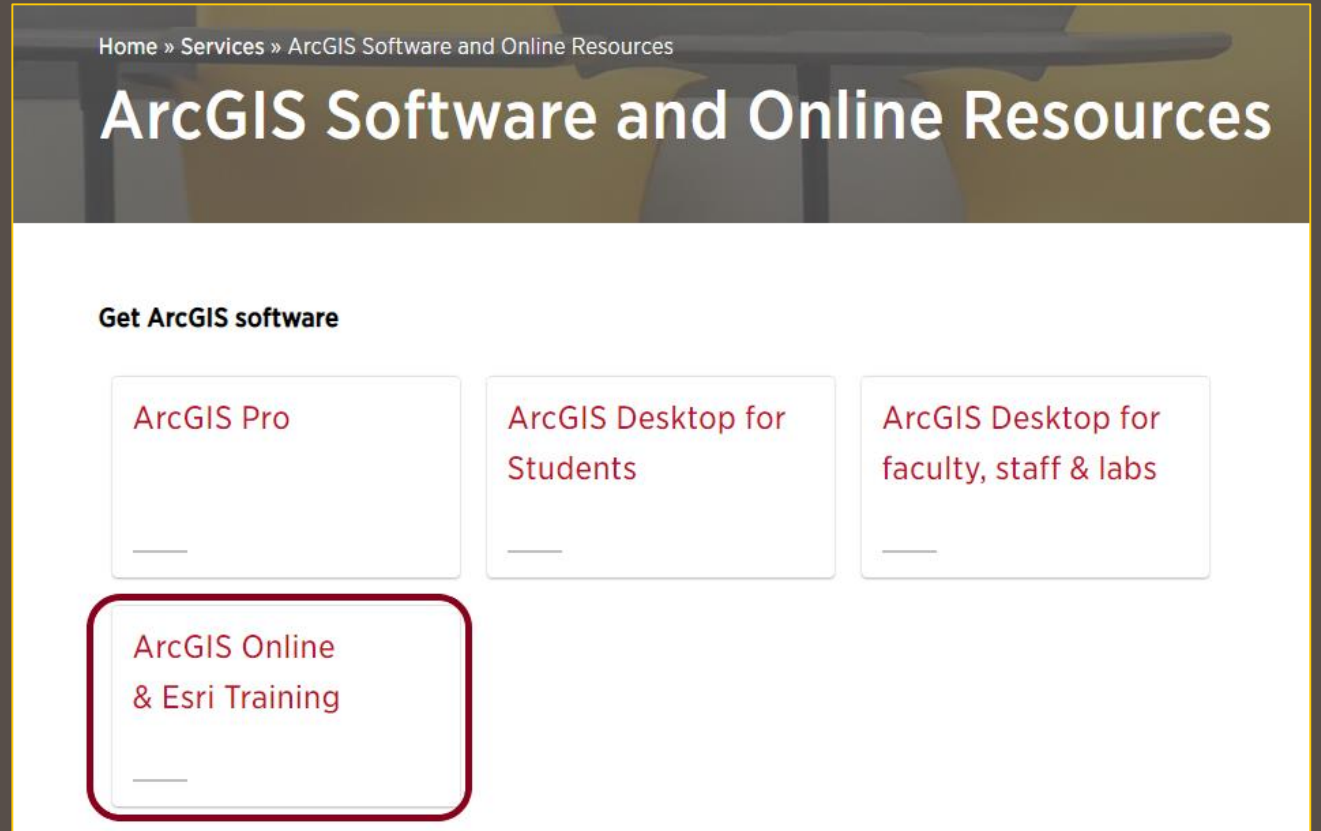
- Ottawa 1:1000 topographic data
- Aerial Images
- Base Layers (e.g. roads, water)
- Elevation Data
- Bathymetric Data

Related Links

- GIS Data Use Agreement
- GIS Workstations at the Library
- Map Collection
- Open Data Ottawa

...continued

Click on ArcGIS Online & Esri Training



...continued

- Follow the instructions on the ArcGIS Online and Esri Training page
- The AGOL organization account uses your MyCarletonOne credentials to make access easier
- Email gis@Carleton.ca if you encounter any errors
- Any content you create in the Carleton organization account must be transferred to a public account when you graduate or you will lose access to the content

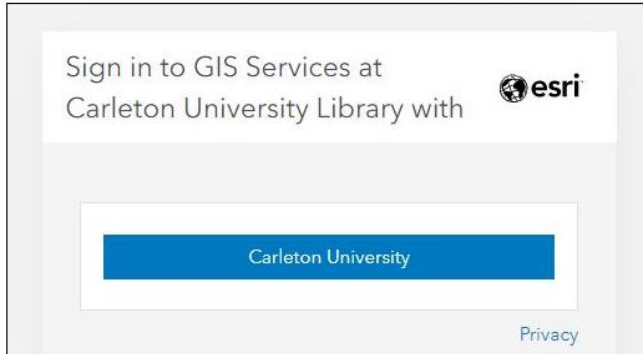
Home » Services » ArcGIS Software and Online Resources » ArcGIS Online and Esri Training

ArcGIS Online and Esri Training

Carleton University affiliated students, faculty & staff are eligible to join the Library GIS Services Organization to access ArcGIS Online to use various applications such as Smart Maps, Business Analyst, Community Analyst, Collector, Survey 123, etc. ***Creating an ArcGIS Online account using your My Carleton One (MC1) credentials gives you additional access to the online Esri Academy -Training***

ArcGIS Online Account Instructions

1. Go to **GIS Services at Carleton University Library** and click on the blue Carleton University button. Sign in to GIS Services at Carleton University using your My Carleton One credentials.

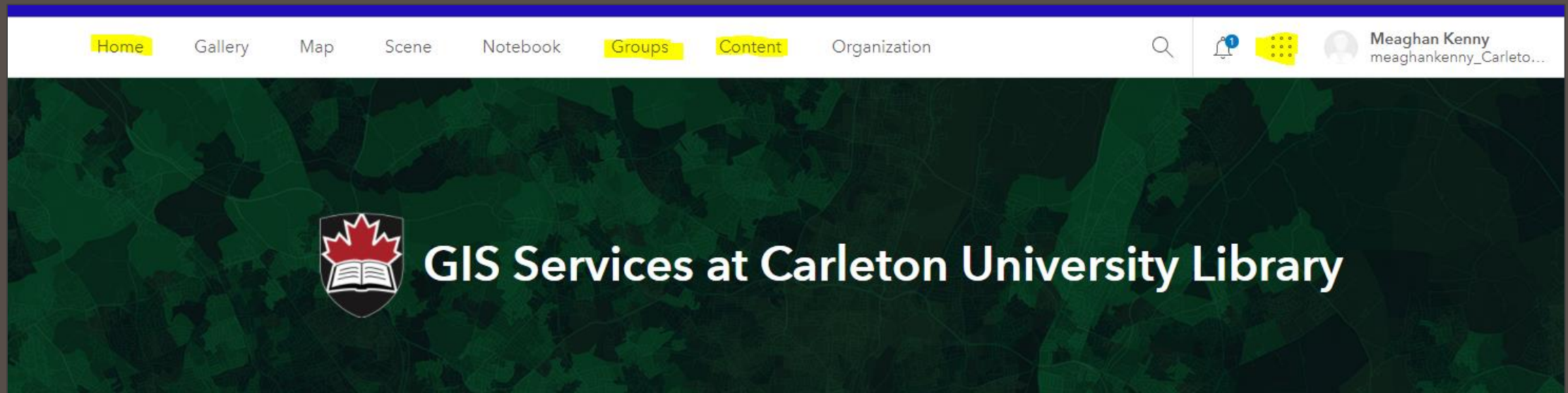


AGOL account with GIS Services organization

Groups – this will take you to a list of any groups you are a member of

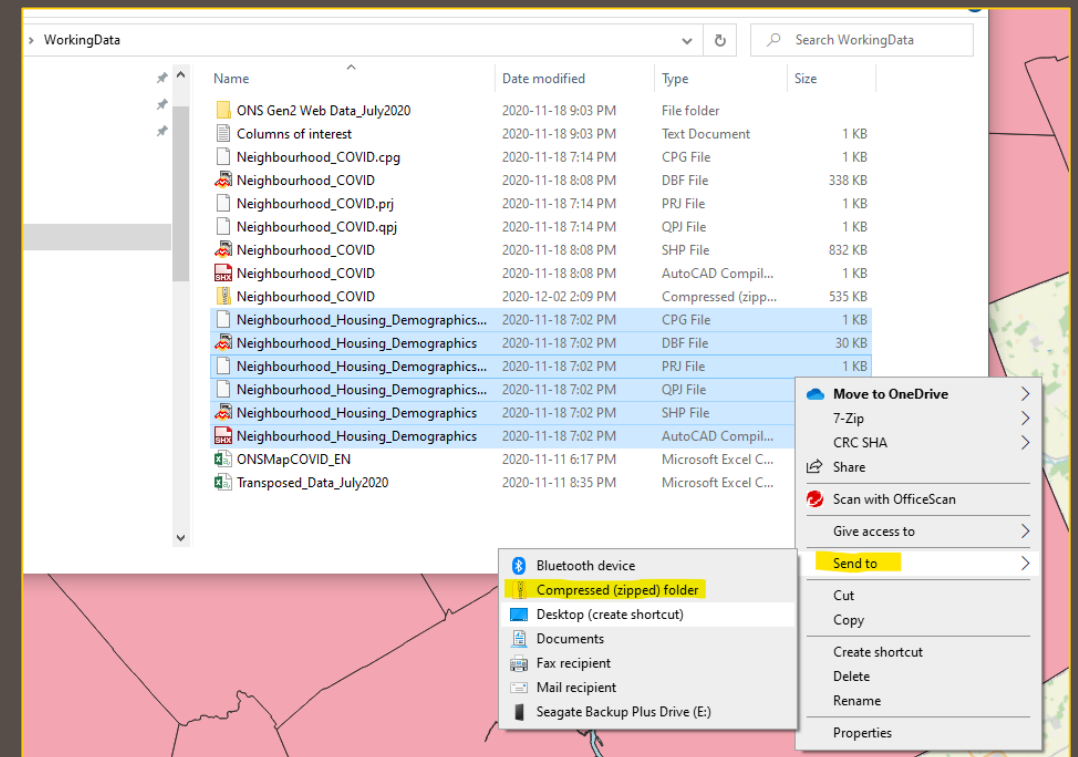
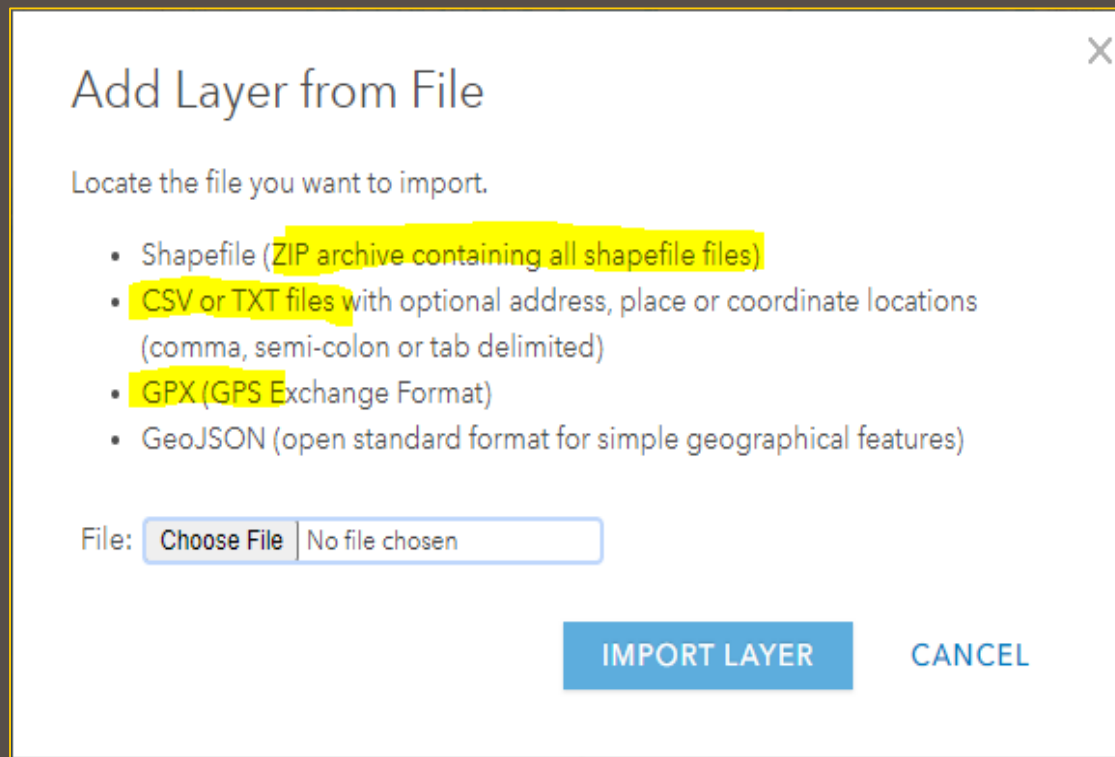
Content – this takes you to any content you own

Apps – “dot box” displays link icons to any apps you want to explore and try out (including Story Maps)



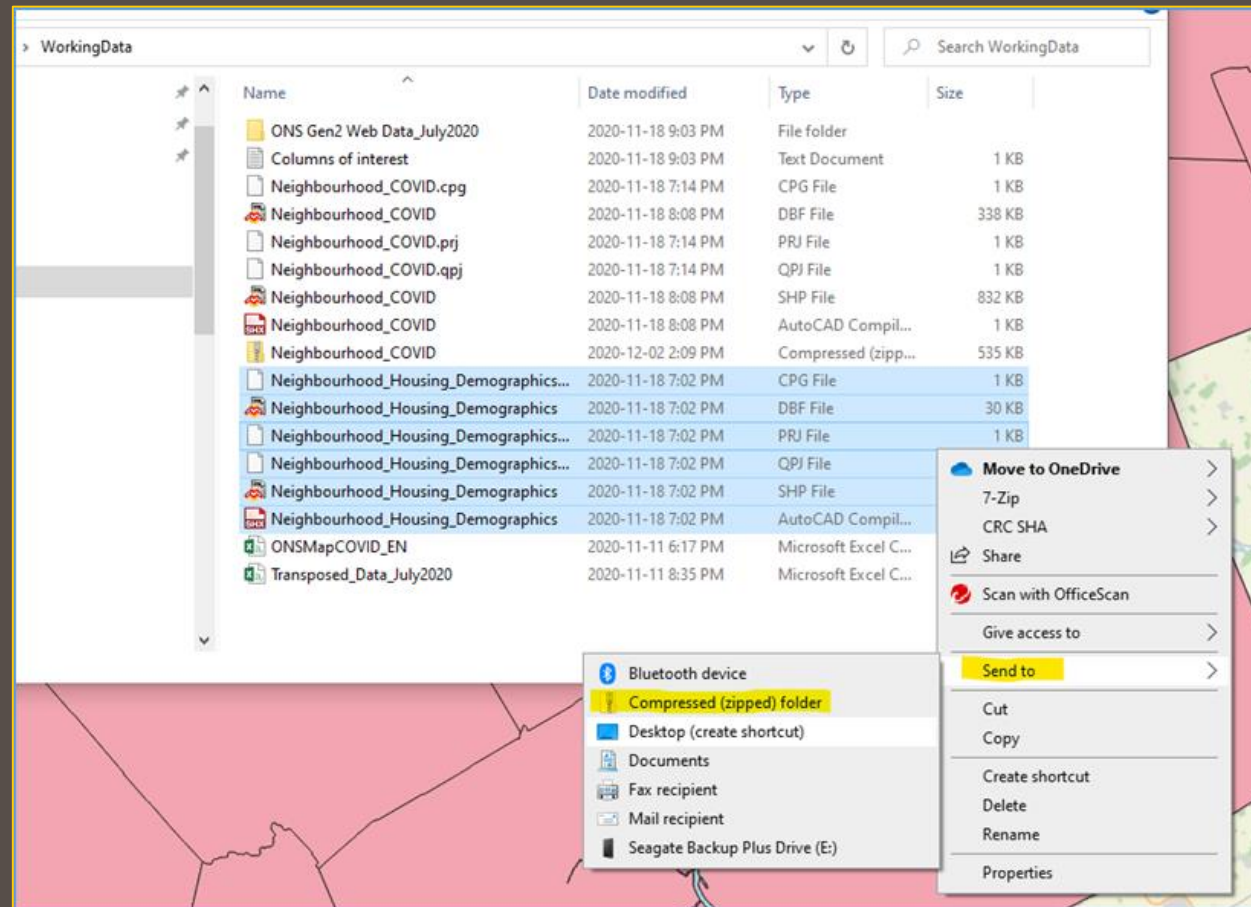
Demo: Prepare your shapefiles for ArcGIS Online

- The shapefiles you want to use in ArcGIS Online must be zipped up separately



Your Turn...Do:

- Go to your working data folder and zip the shapefiles you are going to use in ArcGIS Online

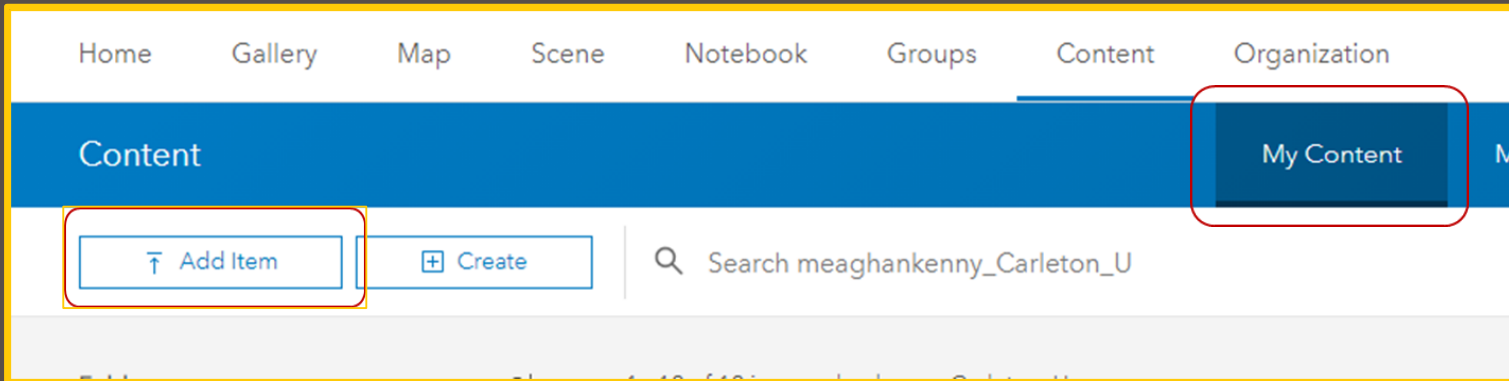


Demo and Do: Launch ArcGIS Online

- Click on content (yours should be empty but anything you create or add will be stored here as items (generally))
- Notice that some of my items are WebMaps, Feature Layers, StoryMaps
- I can add an item to my content by clicking on Add Item | Choose File (my zipped shapefile) | Check Publish this file as a hosted layer
- I must add tags

Do:

- In Content
- Click on Add Item
- Choose **one** of your zipped shapefile folders to add



The screenshot shows the 'Add an item from your computer' dialog box. The 'File' field contains 'Neighbourhood_COVID.zip' and a 'Choose File' button. The 'Contents' section shows 'Shapefile' selected from a dropdown menu. The checkbox 'Publish this file as a hosted layer.' is checked. The 'Title' field contains 'Neighbourhood_COVID'. The 'Tags' section shows two tags: 'Neighbourhood' and 'Data_Journalism', each with a close button. At the bottom right, there are 'Add Item' and 'Cancel' buttons.

Demo: Item Overview

- Once you successfully add the zipped folder as an item you will be redirected to the newly created item overview page
- You will see:
 - Thumbnail
 - Description
 - Layer
 - Dates
 - Options for working with the layer in the right hand panel – such as ***open in map viewer***

Do: Take a moment to explore the components of the Overview page | click on Content to see the item listed in your Content | Click on the Item again| Open in Map Viewer

The screenshot shows the ArcGIS Online interface. At the top, a navigation bar includes links for Home, Gallery, Map, Scene, Notebook, Groups, Content, and Organization. A search icon and a user profile for Meaghan Kenny are also present. Below this, a secondary navigation bar for the item 'Neighbourhood_COVID' includes tabs for Overview (highlighted in green), Data (circled in red), Visualization, Usage, and Settings. The main content area on the left contains an 'Edit Thumbnail' section with a map thumbnail, a description field with a placeholder 'Add a brief summary about the item.', and a 'Description' section with a placeholder 'Add an in-depth description of the item.'. Below these are the 'Layers' section, showing a 'Neighbourhood_COVID Polygon Layer', and an 'Add to Favorites' button. On the right side, a vertical menu contains several action buttons: 'Open in Map Viewer' (circled in red), 'Open in Scene Viewer', 'Open in ArcGIS Desktop', 'Publish', 'Create View Layer', 'Export Data', 'Update Data', and 'Share'. Each button has an 'Edit' link next to it.

Home Gallery Map Scene Notebook Groups Content Organization

Neighbourhood_COVID Overview Data Visualization Usage Settings

Edit Thumbnail

Add a brief summary about the item.

Feature Layer (hosted) by meaghankenny_Carleton_U

Created: Dec 2, 2020 Updated: Dec 2, 2020 View Count: 0

Add to Favorites

Description

Add an in-depth description of the item.

Layers

Neighbourhood_COVID Polygon Layer

Edit

Open in Map Viewer

Open in Scene Viewer

Open in ArcGIS Desktop

Publish

Create View Layer

Export Data

Update Data

Share

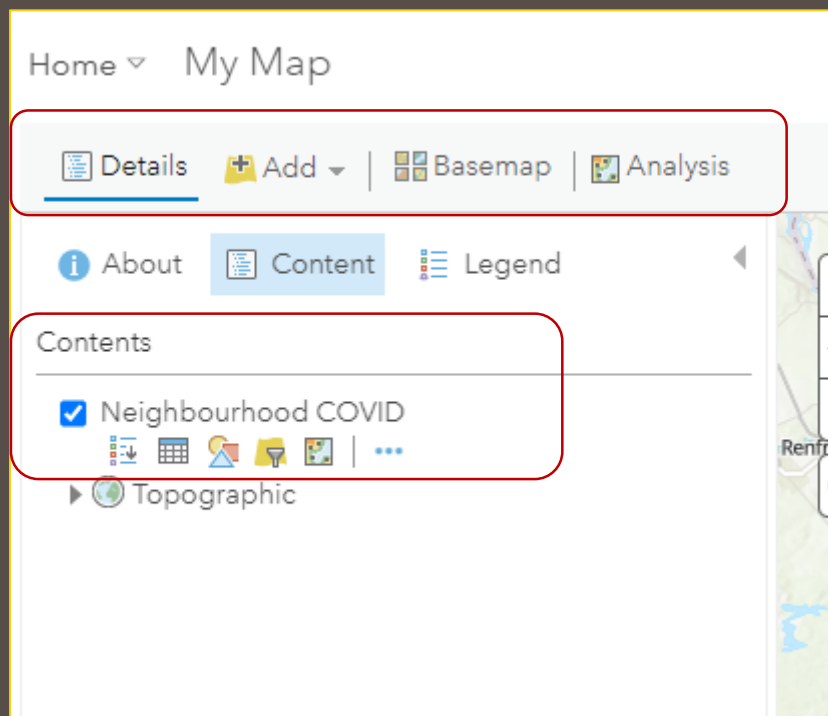
Demo: WebMap Components

Content Panel

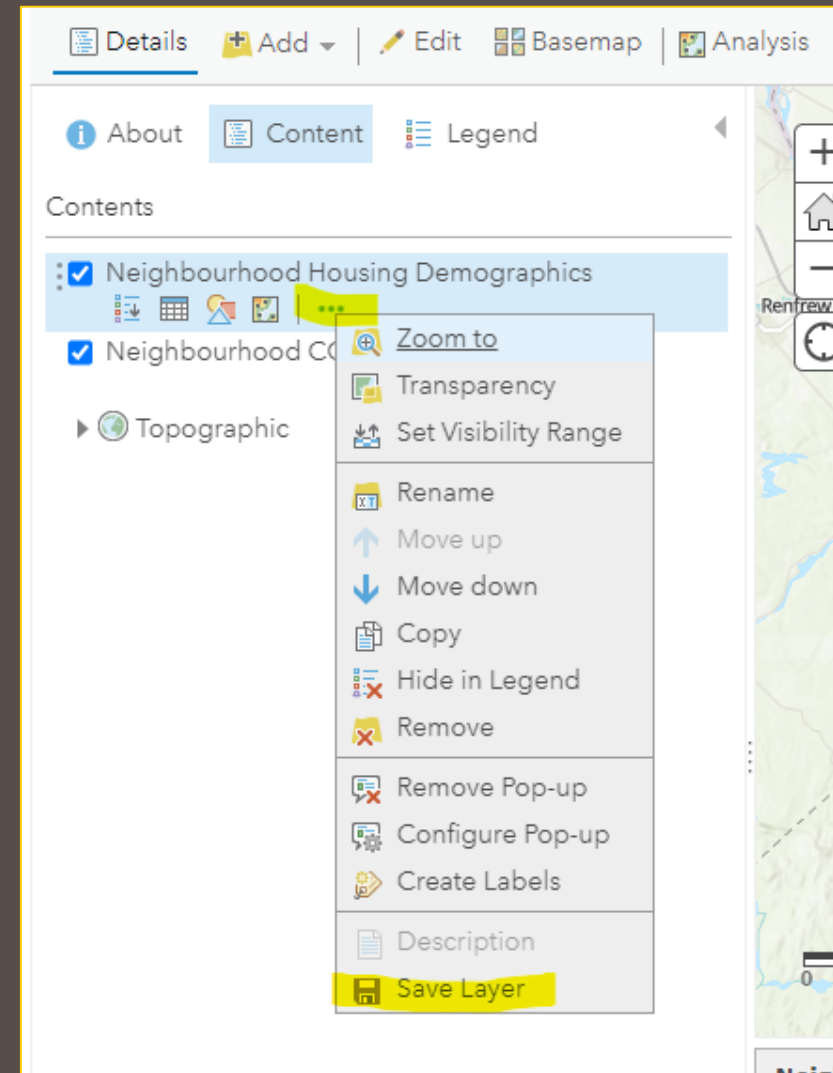
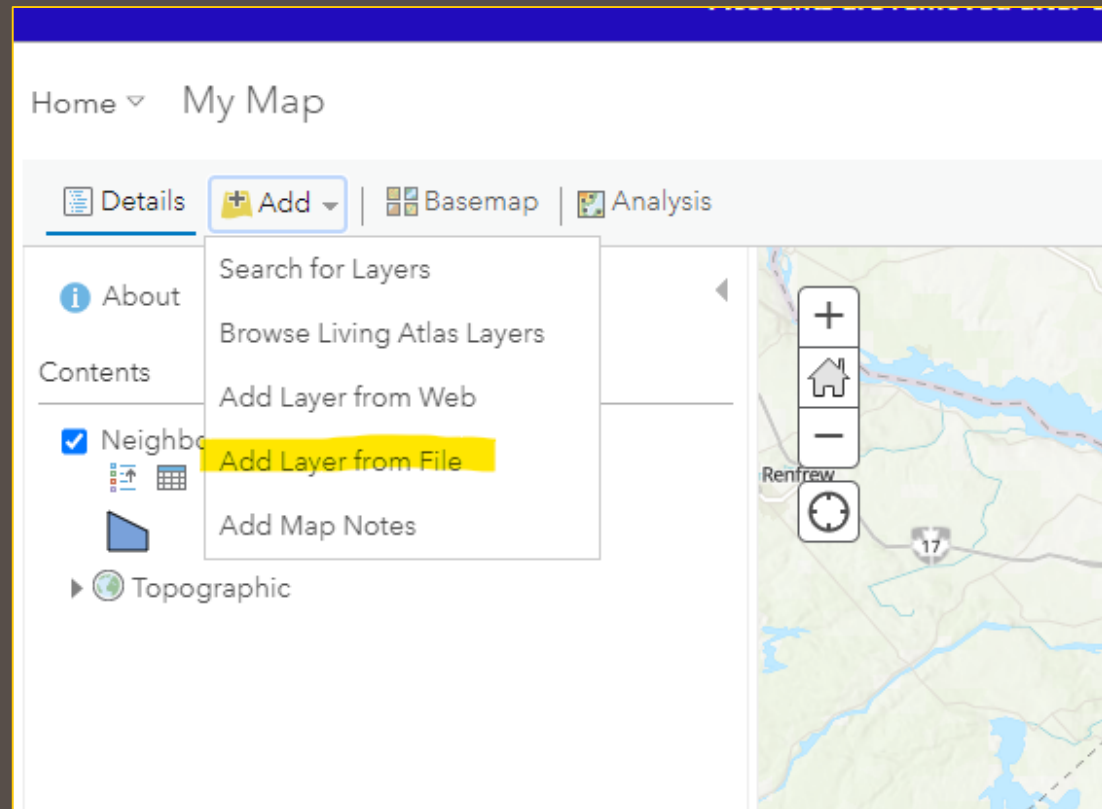
- About | Content | Legend
- Content | Neighbourhood Layer
- Attribute Table
- Change Style
- Filter (like field calculator in Q)
- Perform Analysis

Grey Ribbon

- Details
- Add (Use this to add more layers to your Map)
- Basemap
- Analysis



Do: Click on Add | Select Add Layer from File | add your zipped neighbourhood demographic shapefile | Save Layer by clicking on “...” (more options) | This will create and save the shapefile as a hosted feature layer in your content

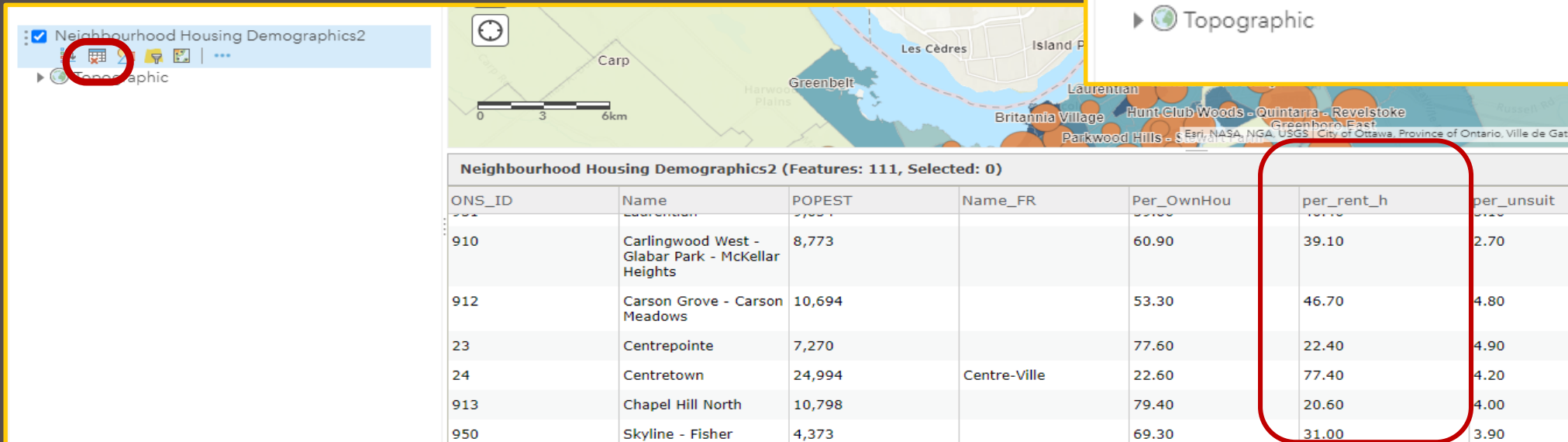
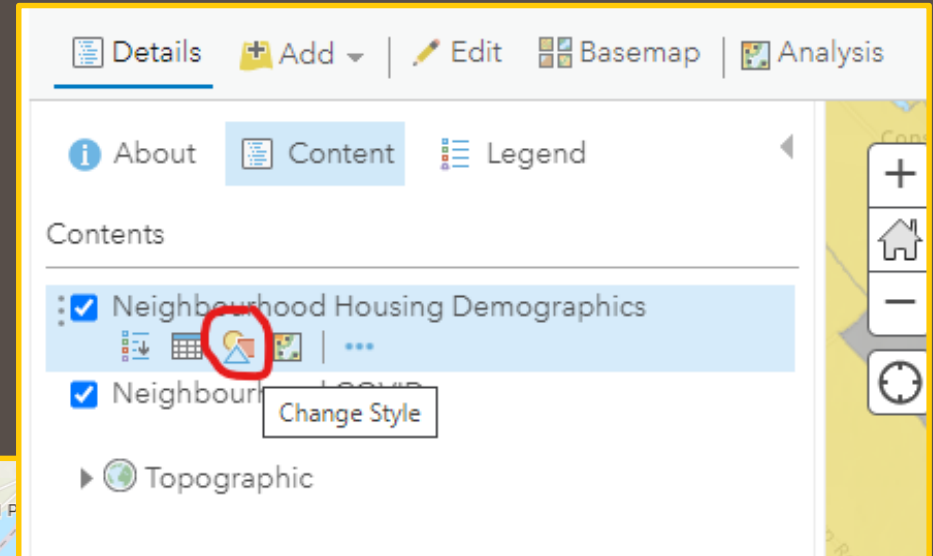


Symbology/Change Style Demo and Do

- You can change the symbology by clicking on the very tiny “change style” icon as seen in the image below
- For best results, for this type of data, it is important that all your **data is in integer format**. If the column you want to display has text or characters, you will not have the option to use “Counts” Style (as seen in the next slide).

Do:

- Open the **Attribute Table** icon and make sure the column you want to display is in **integer** format (If you need to make changes you can do this in QGIS and re-add the updated shapefile as a new hosted feature layer). If you are not happy with your field headings see slide #30 for bonus instruction on changing field headings
- Click on the **Change Style** Icon

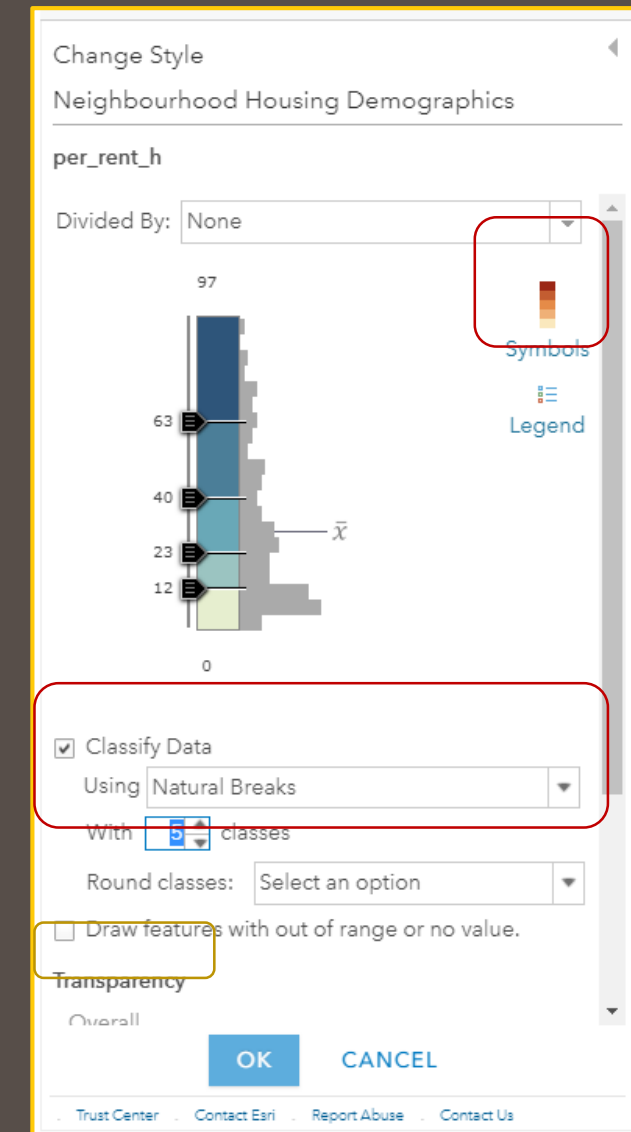
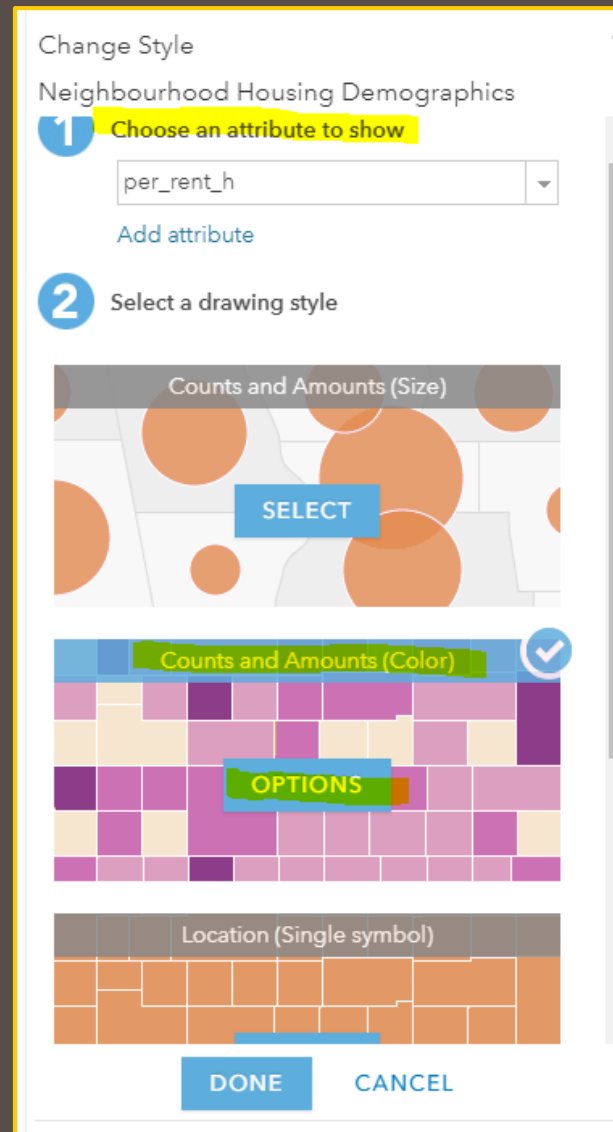


ONS_ID	Name	POPEST	Name_FR	Per_OwnHou	per_rent_h	per_unsuit
910	Carlingwood West - Glabar Park - McKellar Heights	8,773		60.90	39.10	2.70
912	Carson Grove - Carson Meadows	10,694		53.30	46.70	4.80
23	Centrepoinste	7,270		77.60	22.40	4.90
24	Centretown	24,994	Centre-Ville	22.60	77.40	4.20
913	Chapel Hill North	10,798		79.40	20.60	4.00
950	Skyline - Fisher	4,373		69.30	31.00	3.90

Demo and Do: Demographic Data Symbolology/Change Style

DO:

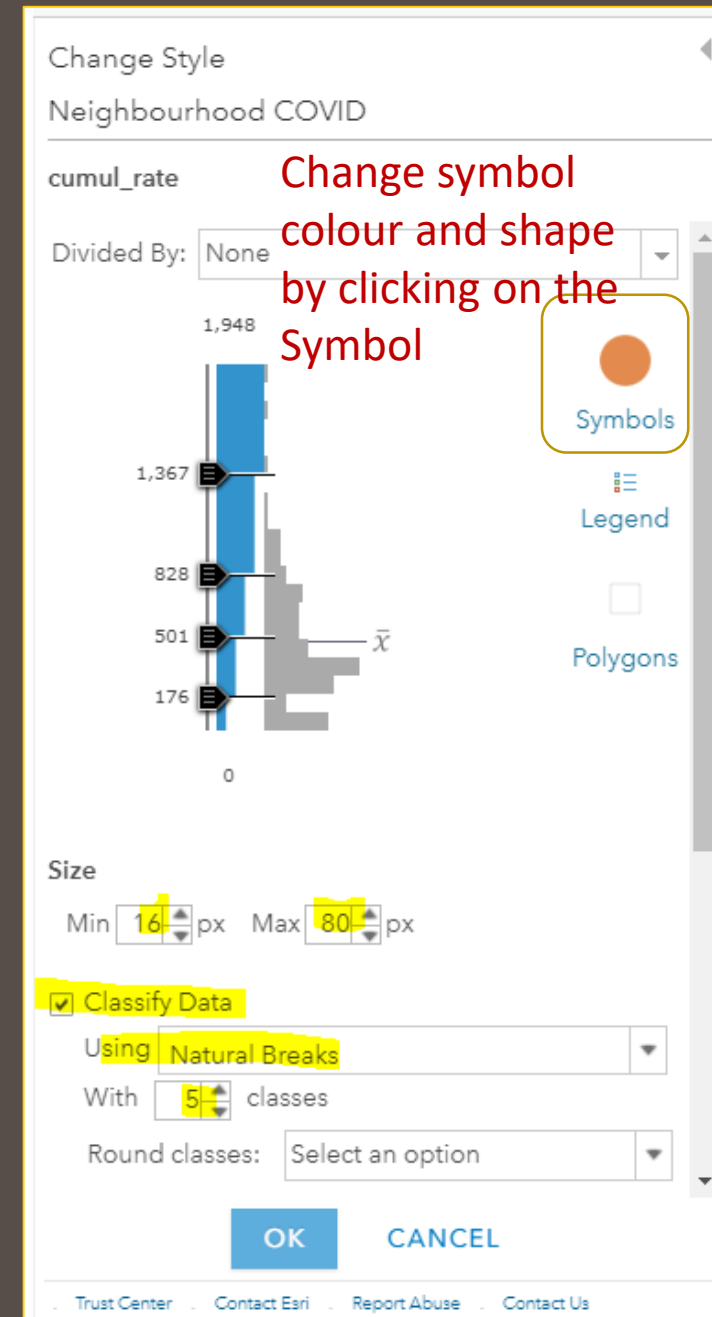
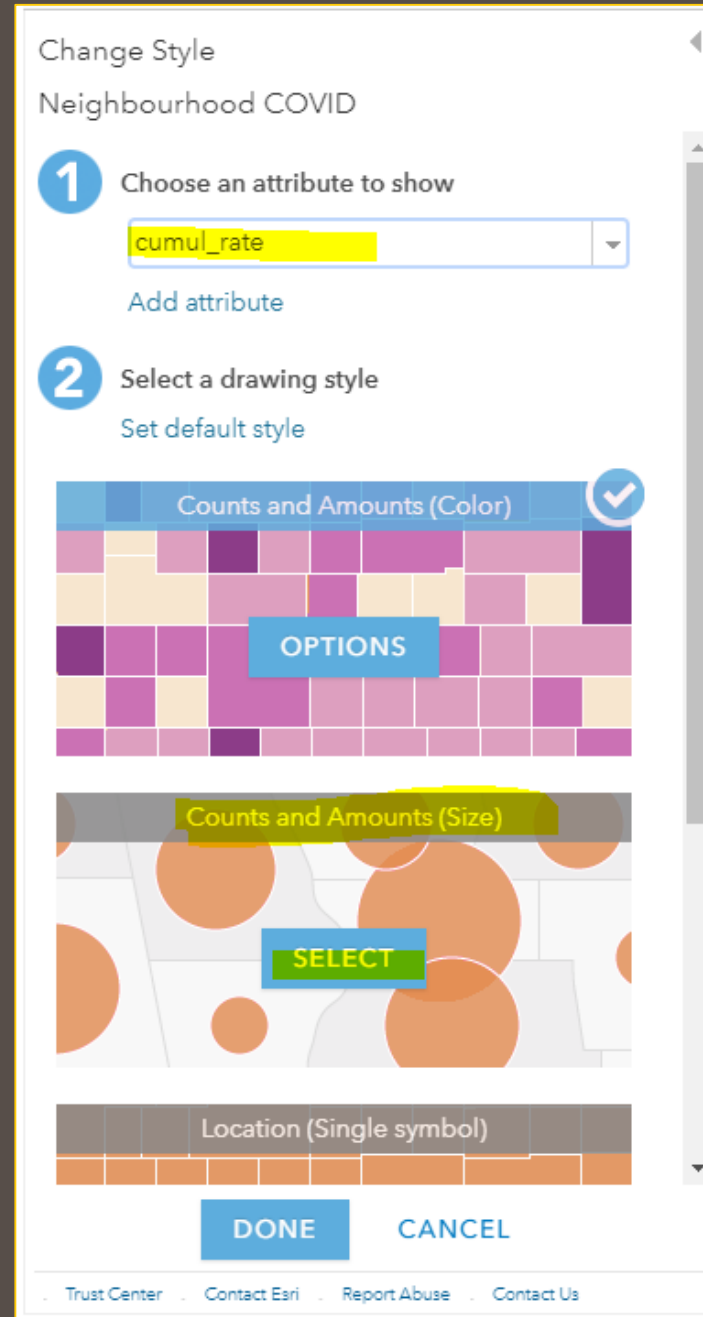
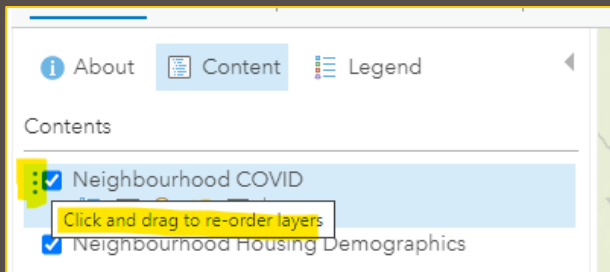
- Choose the attribute you want to symbolize for your **demographic** data
- Choose Counts and Amounts (Color)
- Check Classify Data using Natural Breaks (I changed my breaks to 5 classes)
- Play with transparency if you want
- **Click OK** (very important!)
- **Click Done** (Very important!)
- *If your data was not integer, you would not have either of the “Count” options*



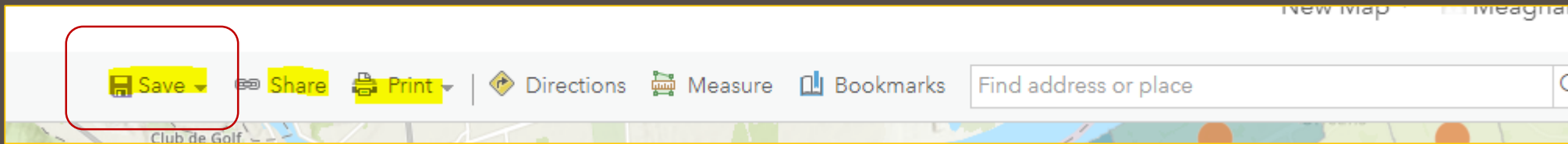
DO: COVID Data

Change Style/Symbology

- Choose the attribute you want to show
- Choose Counts and Amounts **Size**
- You can change your symbol colour by clicking on the Symbol represented in “Symbols”
- Classify Data using Natural Breaks
- Optional - You can set a minimum and maximum size of the symbols (I like to decrease my symbol size to 8 min and 50 max)
- Click Ok
- Click Done
- *If your COVID counts are underneath your Demographics, click and drag the layer to the top position in the content list*



Demo and Do: SAVE the Map!



- Click the **Save** tab
- If it's your first time saving the map you can choose "save as" or "save"
- Fill out the Save Map box
- Choose a concise and relevant title (unlike my title in the image I've shared!)
- You need to add **tags** (ArcGIS Online requires tags)
- Add a brief summary for your audience if you wish
- Click **Save Map**

A screenshot of the 'Save Map' dialog box. It contains the following fields:

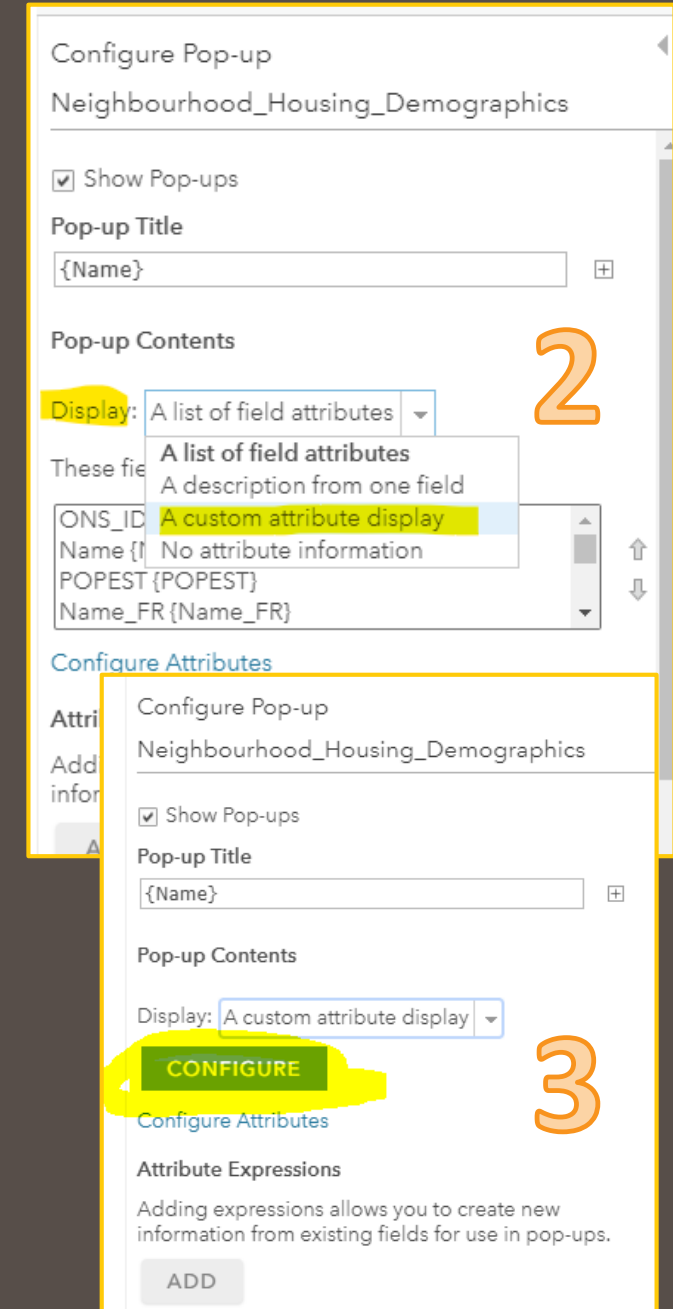
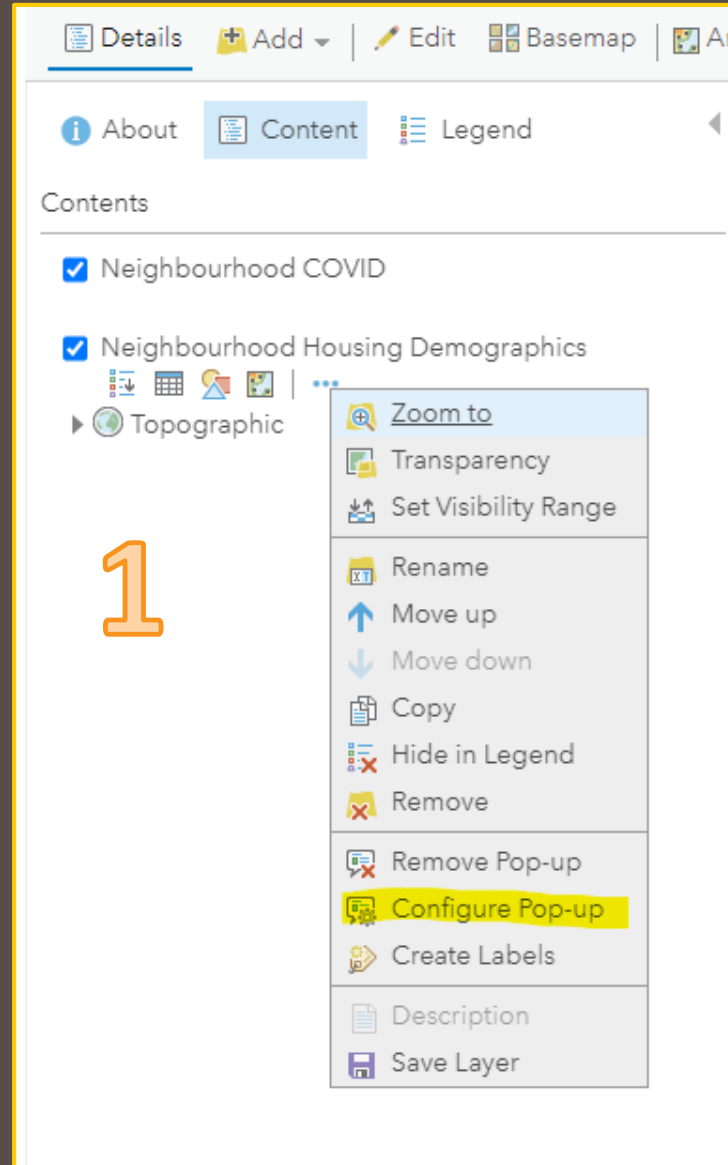
- Title:** Neighbourhood Cumulative COVID Rate and Percent of Ho
- Tags:** COVID Maps (with a close icon) and Add tags
- Summary:** Description of the map.
- Save in folder:** meaghankenny_Carleton_U (with a dropdown arrow)

At the bottom right, there are two buttons: 'SAVE MAP' (in a blue box) and 'CANCEL'.

Demo: Configure pop-ups

DO:

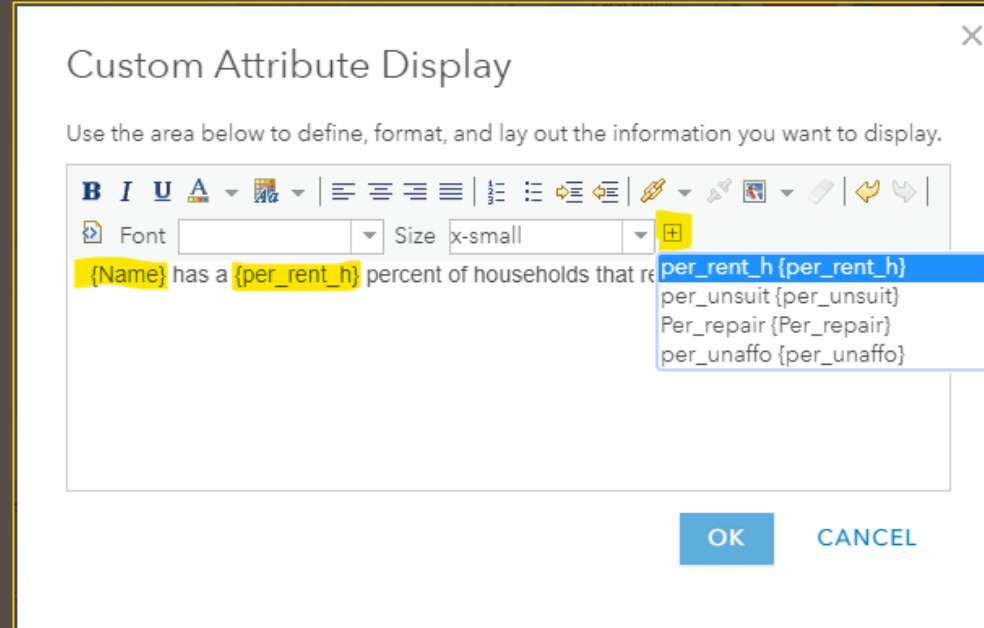
- To configure pop-ups, click More Options (...) on the layer.
- Then choose Configure Pop-up.
- From the **Display** drop down menu Choose a “**custom attribute display**.”
- Click the big green **Configure** button to open the custom attribute display configuration panel.



Demo: Configure a custom attribute display using text and fields

Do:

- In Custom Attribute Display you can enter a combination of **free text** and **fields**. Click **[+]** to display a drop-down list of **fields**, the field names appear in curly braces when added to your pop-up.
- When you are satisfied with your text click **OK**
- You can add pop-up Media if you wish
- Click **OK** when you are finished configuring your pop-up
- Click on a polygon in your layer and note the change in your pop-up box



Custom Attribute Display

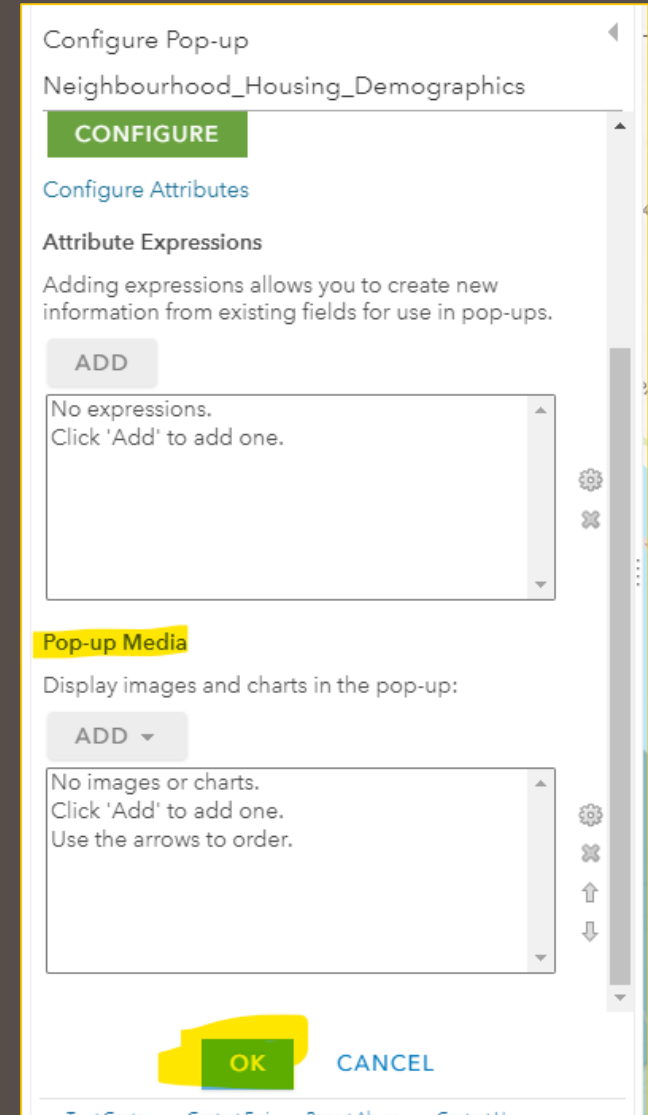
Use the area below to define, format, and lay out the information you want to display.

Font [] Size x-small []

{Name} has a {per_rent_h} percent of households that re

per_rent_h {per_rent_h}
per_unsuit {per_unsuit}
Per_repair {Per_repair}
per_unaffo {per_unaffo}

OK CANCEL



Configure Pop-up

Neighbourhood_Housing_Demographics

CONFIGURE

Configure Attributes

Attribute Expressions

Adding expressions allows you to create new information from existing fields for use in pop-ups.

ADD

No expressions. Click 'Add' to add one.

Pop-up Media

Display images and charts in the pop-up:

ADD

No images or charts. Click 'Add' to add one. Use the arrows to order.

OK CANCEL

Fine Tuning Pop-Ups

Demo:

- There are two layers that are represented when you click on a neighbourhood polygon
- To make it easier for your audience, change the pop-up title to something more concise and relevant

The screenshot shows the 'Configure Pop-up' window for the 'Neighbourhood_Housing_Demographics' layer. The 'Show Pop-ups' checkbox is checked. The 'Pop-up Title' field is highlighted in yellow and contains the text 'Neighbourhood Rental Rate - {Name}'. To the right of this field is a plus sign icon. Below the title field is the 'Pop-up Contents' section, which includes a 'Display' dropdown menu set to 'A custom attribute display'. At the bottom of the configuration window is a green 'CONFIGURE' button and a blue link that says 'Configure Attributes'.



DO:

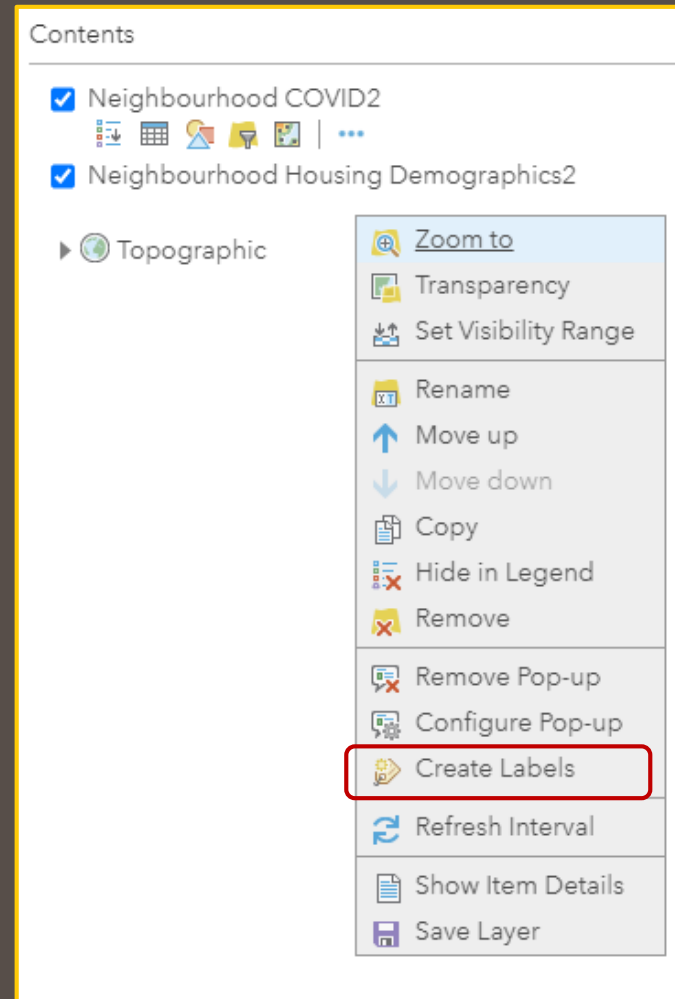
- Go back to tweak your pop-up by clicking on your layers “more options” | click on configure pop-up | Change your pop-up title to something concise and relevant | you can use the plus sign on the right of the title box to add **fields** again
- See [here](#) for more in-depth walk through of configuring pop-ups
- Repeat the steps for configuring pop-ups for your other layer(s) and **SAVE YOUR MAP!!**



Add **Labels** to your Neighbourhood Demographic Layer

Do:

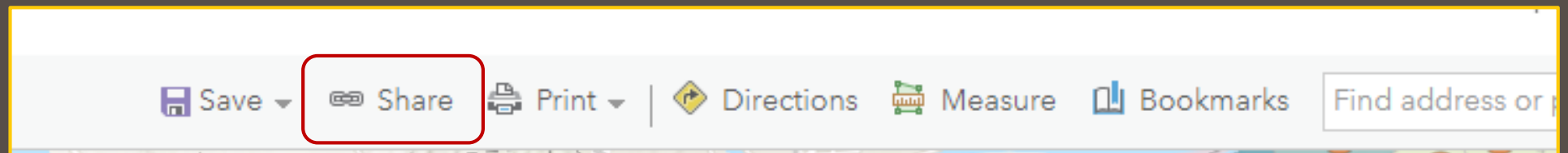
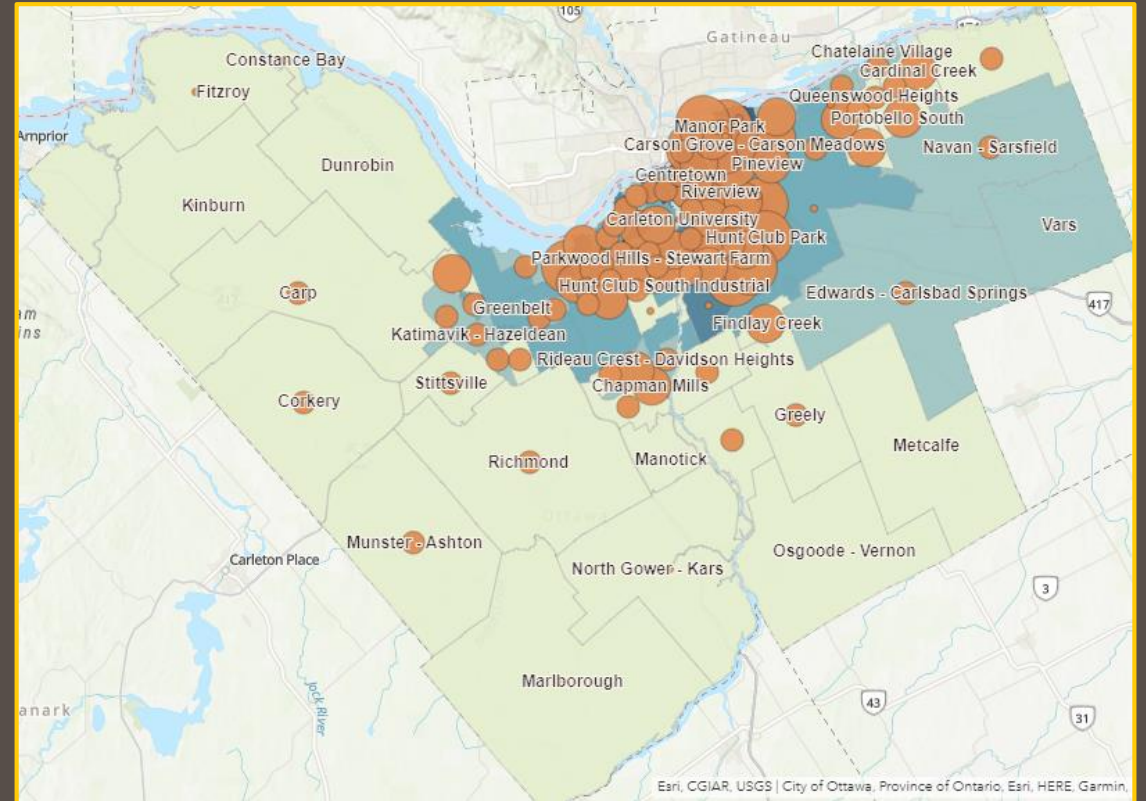
- Click on your **more options** icon under your Demographics layer
- Click on **Create Labels**
- In the Label Features panel, make sure the **Label Features box is checked**
- Use the Drop down menu for Text to choose the Field you want to display as labels (I used neighbourhood “Name” column)
- Adjust your font settings to ensure the labels are clean and clear for your audience
- I like to add a **Halo** so my labels pop against darker backgrounds
- When you are happy with how your labels appear, **Click OK!**



Share and create a Web App to imbed on a website

Do:

- When you are happy with your labels and the appearance of your map, zoom in or out to the map extent you want your audience to see when they view the embedded map on your webpage
- If you zoom in or out too much the map may be less impactful to grab attention. Think of the map as a first impression or the “hook”
- Next click on the **Share** tab in the grey ribbon



Share your Web Map

Do:

- Use the check boxes to include who you want to share your map with.
- Make it available for public viewing on your website by checking off the Everyone (public) box.
- If you are a member of a group or multiple groups you can check off members of these groups
- If you were happy with the map extent you previously set, check off Share the current map extent
- There is a link to the map you can copy for your records and share
- There are also two options to embed the map...the next slides will explain the two options

Share

Choose who can view this map.

Your map is currently shared with these people.

- ☒ Everyone (public)
- ☒ GIS Services at Carleton University Library
- ☐ Members of these groups:
 - ☐ Trial for Iman

Link to this map

<https://arcg.is/10naC8>

☒ Share current map extent

Embed this map

EMBED IN WEBSITE CREATE A WEB APP

Facebook Twitter

DONE

Option One: Embed in Website

- This is the fastest “no fuss” way to get your map to your website
- You can adjust the size of the map that your viewers will see on your website before opening it in a new tab (remember this is the “hook”)
- You can play with the Map Option settings to enable or disable viewer controls or Map components (e.g. scale bar, legend)
- Copy the HTML to embed it on the webpage.
- If you are happy with your settings click **Done**
- *Or check the next slide for the WebApp option*

Embed in Website

Choose the size of your map. i

W X H ☒ Allow responsive sizing

Copy and paste HTML to embed in website.

Map Options

Add Symbol

Choose options to display on your map.

☒ Zoom Control

☒ Scale Bar

☒ Home Button

☒ Location Search

☐ Basemap Selector

☒ Current Extent

☐ View larger map

☒ Map Details

☐ Disable scroll zoom

☒ Legend

☐ Layer Toggle

☒ Preview image

Choose Active Panel

Legend

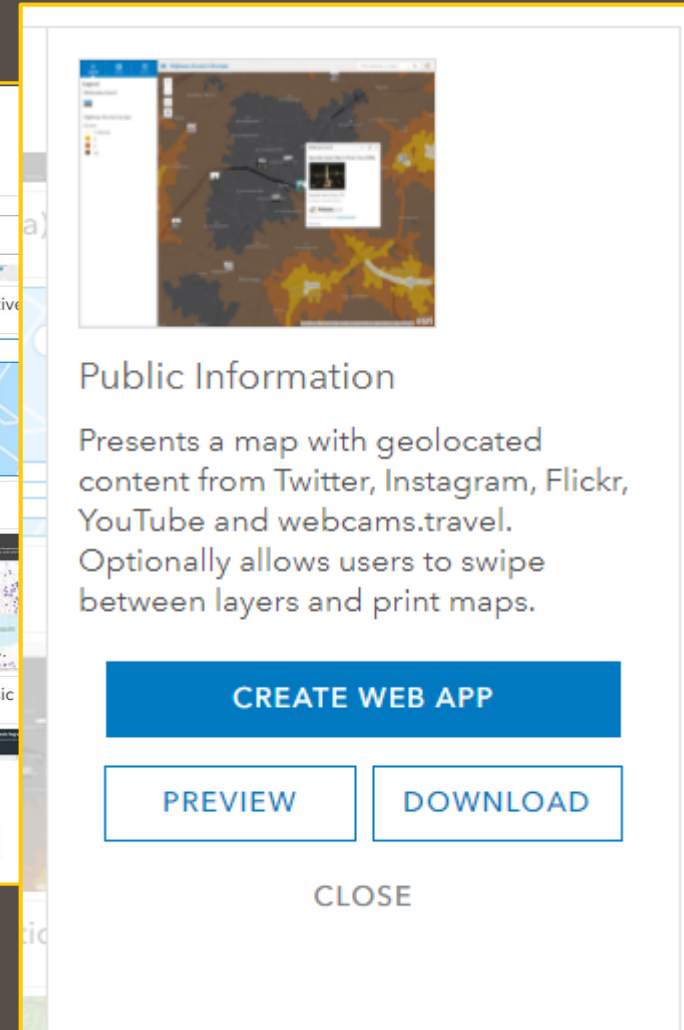
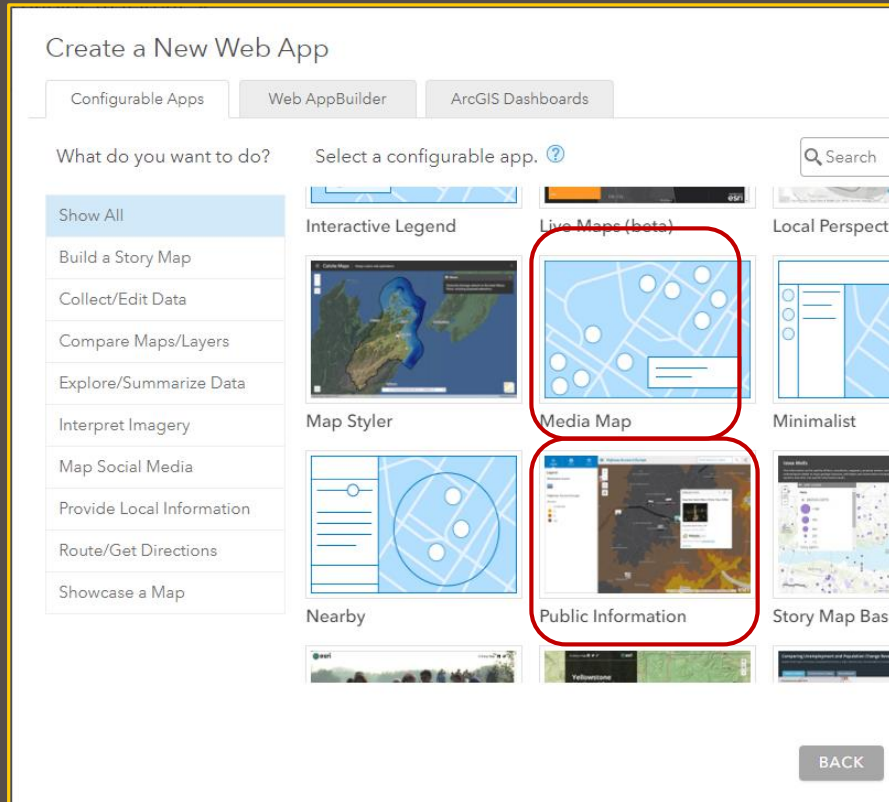
Map Preview

BACK

DONE

Option two: Create a Web App

- Option two allows you to create an app that you can configure and customize – leveraging templates and “widgets”
- You can explore and preview different app templates like **Media Map** or **Public Information** by click on them
- When you are happy with the app template you have chosen, click **Create Web App**
- You will have a familiar box pop-up that requires you to fill in the title, tags, summary, and folder like you have in previous steps
- Of course when you are finished filling in the required information, click **Done!**
- The Web App can be a lot of fun but it is more involved, so I recommend you use the following **resources**
 - <https://doc.arcgis.com/en/web-appbuilder/create-apps/make-first-app.htm>
 - <https://doc.arcgis.com/en/arcgis-online/create-maps/choose-configurable-app.htm>

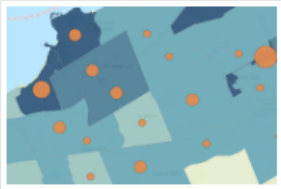


Configure Web App

- Creating and Configuring your Web App
- Here is where you configure the context and map **Options** to for your audience
- When you are finished with the option settings click **Save** and then **Launch** to preview the Web App

Configure: COVID Rate per Percent of Household

General Options Social Media Feeds Search



COVID Rate per Percent of Households that Rent

Select Web Map

Provide general information about your application with a title and description.

Application Title

My Map

Application Summary [Edit](#)

Map Summary

Splash Screen

Shows a dialog window on application load.

☐ Enable Splash Screen

Configure: COVID Rate per Percent of H

General Options Social Media Feeds Search

Side Panel Settings

Default Menu Panel

Legend

Enable or disable features in your application.

- ☒ Enable Summary Information
- ☒ Enable Modified date
- ☒ Enable Views Count
- ☒ Enable More Information link
- ☒ Enable Legend Panel
- ☒ Enable About Panel
- ☒ Enable Layers Panel

Tools

- ☒ Enable Home Button
- ☐ Enable Scalebar on the map
- ☒ Enable Locate Button
- ☒ Enable Basemap Toggle
- ☒ Enable Share Dialog
- ☒ Enable Bookmarks
- ☒ Enable OverviewMap widget
- ☐ Enable Print Button
- ☐ Open Overview Map Widget by default

Basemap Toggle

Choose which basemaps can be toggled on your application.

Save Launch Close

Share your Web App or Embed Map

- When you are happy with how you have configured your Web App, Click on the Share icon in the top right corner
- Resources again:
 - <https://doc.arcgis.com/en/web-appbuilder/create-apps/make-first-app.htm>
 - <https://doc.arcgis.com/en/arcgis-online/create-maps/choose-configurable-app.htm>

The screenshot displays an ArcGIS web application interface. The main map area shows a geographical region with various place names like Constance Bay, Kinburn, and Dunrobin. The map is overlaid with data points represented by orange circles of varying sizes, indicating different COVID rates. A legend on the left side of the map provides a key for these circles, with categories such as 'Neighbourhood_COVID2' and 'Neighbourhood_Housing_Demograph'. The legend includes color-coded ranges for 'cumul_rate' and 'per_rent_h'. In the top right corner of the map, there is a search bar and a share icon. A 'Share' dialog box is open, showing options to share the map via social media (Facebook, Twitter, Email, Link) or to generate a map link. The dialog also includes an 'Embed Map' section with a text area containing an iframe code snippet and a dropdown menu for selecting the map size (width/height), currently set to '100% x 640px'.

COVID Rate per Percent of Households that Rent

Find address or place

Legend

Neighbourhood_COVID2

cumul_rate

- > 1,367 - 1,948
- > 828 - 1,367
- > 501 - 828
- > 176 - 501
- 0 - 176
- Other

Neighbourhood_Housing_Demograph

per_rent_h

- > 63.8 - 97
- > 40 - 63.8
- > 23 - 40
- > 12 - 23
- 0 - 12
- Other

Share

Share this map

Facebook Twitter Email Link

☐ Share current map extent

Map Link

<https://arcg.is/1DbLje0>

Embed Map

```
<iframe width="100%" height="640px"
src="https://carleton-
u.maps.arcgis.com/apps/PublicInformation/index.
html?appid=5f19bfaa11324be3a28cdcdb6343f0ff"
frameborder="0" scrolling="no"></iframe>
```

Size (width/height): 100% x 640px

Change Field Headings in ArcGIS Online Attribute Table

- To help the people who use your hosted feature layers understand what each field stores, you should provide a useful, easy-to-read field display name, provide text to describe the purpose of each field, and define what type of data each field contains.
- Go to your feature **layers item overview** page, click on **Data**
- Click on **Fields**
- Under **Display Name**, click on the **Field** Heading you want to change
- Click on the **edit Pencil** next to the Field Heading title
- When you are happy with your change, click **Save**
- Full details are in the link below:
 - <https://doc.arcgis.com/en/arcgis-online/manage-data/describe-fields.htm>

1

Overview Data Visualization Usage Settings

Edit Thumbnail

Add a brief summary about the item.

Feature Layer (hosted) by meaghankenny_Carleton

Created: Dec 2, 2020 Updated: Dec 2, 2020 View C

Open in Map Viewer

2

Overview Data Visualization Usage Settings

Table Fields

Table Order in Table Filter

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Display Name	Field Name
<input type="checkbox"/> FID	FID
<input type="checkbox"/> flag	flag
<input type="checkbox"/> ONS_ID	ONS_ID
<input type="checkbox"/> Name	Name
<input type="checkbox"/> POPEST	POPEST
<input type="checkbox"/> Name_FR	Name_FR
<input type="checkbox"/> Per_OwnHou	Per_OwnHou
<input type="checkbox"/> per_rent_h	per_rent_h
<input type="checkbox"/> per_unsuit	per_unsuit

4

per_rent_h

Description

A brief summary of the item is not available.

Field Value Type ?

Field Value type is not available.

Settings

5

% Households Renting

Save Cancel

Thanks and great work everyone!

- Contact us at gis@Carleton.ca with your questions