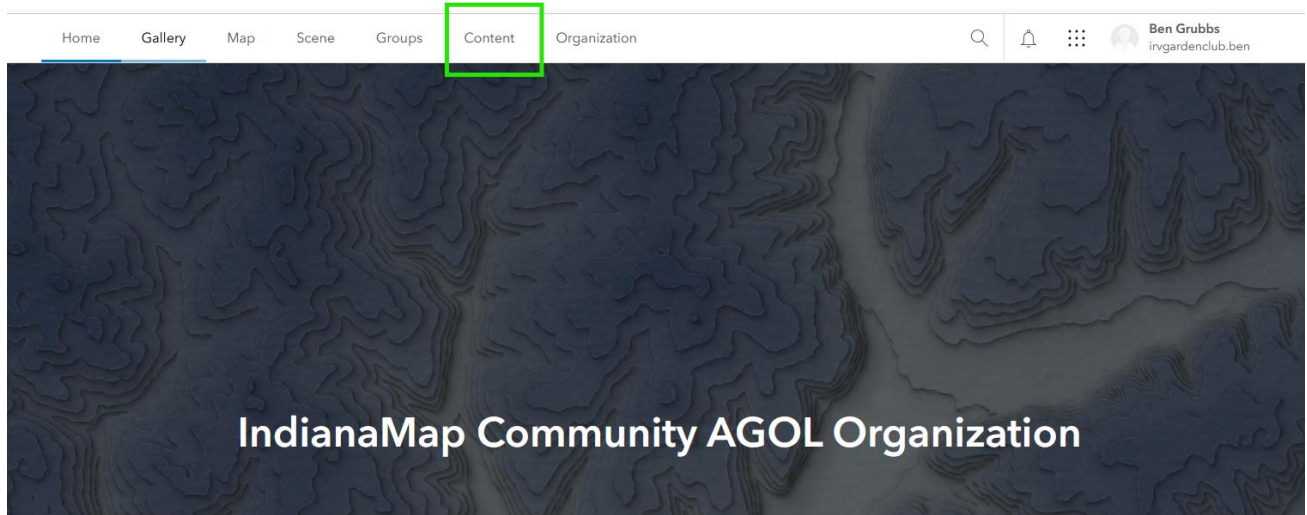


Creating and Uploading Content in AGOL

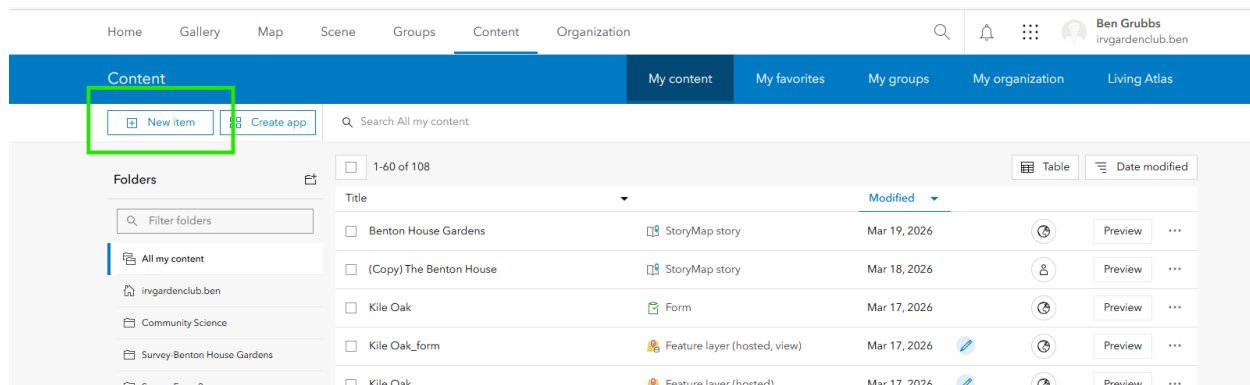
- Adding Content to your AGOL Account..... 1
- Define Your Own Feature Layer 3
- Add new fields to the different layers 6
- Define and Enforce Field Domains..... 9
- Upload CSV 13
- Upload Shapefile..... 18
- Add these datasets to the Web Map..... 21

Adding Content to your AGOL Account

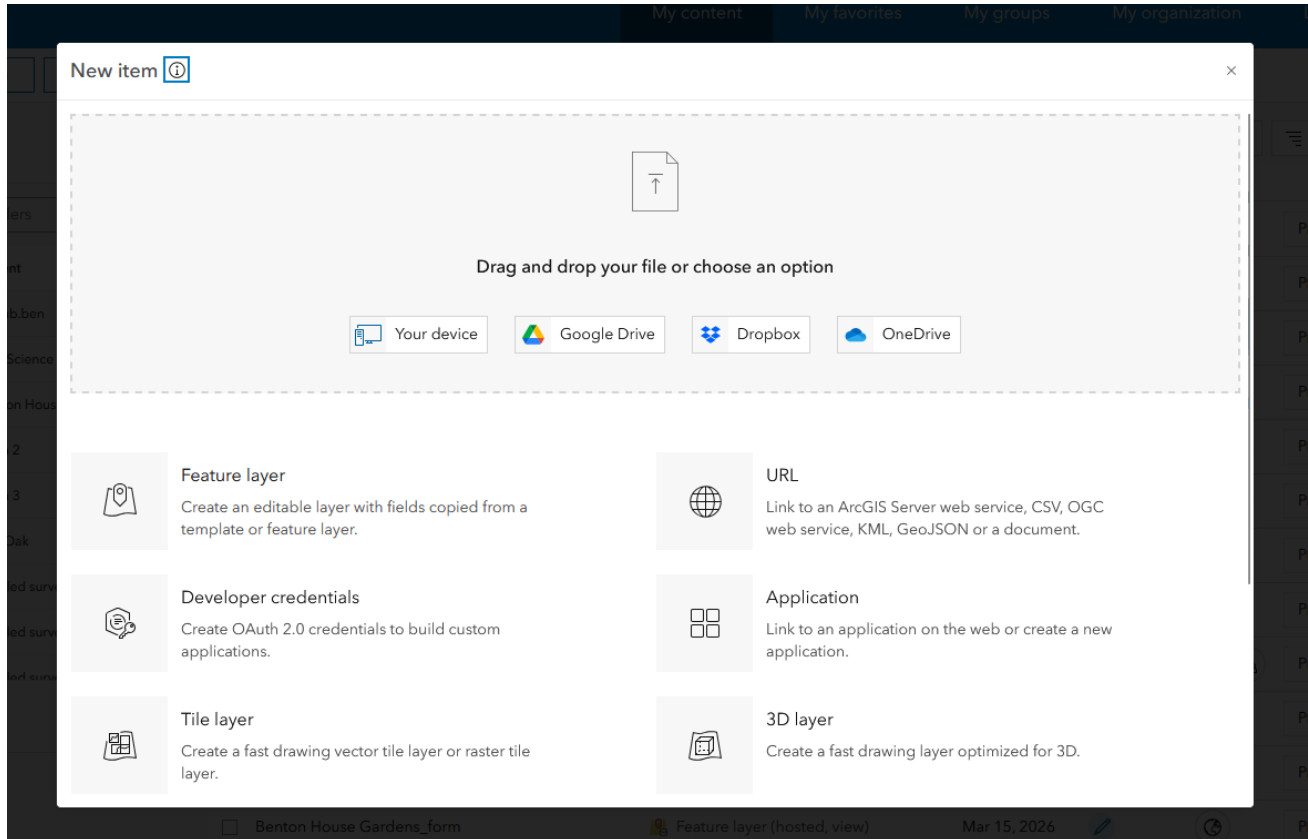
1. To get started, sign in to AGOL and click the “Content” tab



2. In your Content page, select “New Item”



3. In the New Items menu, take note of the different options
 - a. Feature Layer – Select this one for now
 - b. URL



Define Your Own Feature Layer

1. Follow steps 1 – 3 above
2. After selecting “Feature Layer”, select “Define your own layer”. Click next

Create a feature layer

Select an option to create an empty feature layer.

Define your own layer

Specify the layers and tables.

Select an existing feature layer

Use the layers and fields from an existing feature layer in your organization.

Use a template

Use the layers and fields from a template.

Provide an ArcGIS Server layer URL

Use the layer and fields from an ArcGIS Server feature layer.

Upload a file

Use the layers, fields, and the data contained in a CSV, Excel, Shapefile or other supported file type.

Back

Cancel

Next

Page 4 of 20

3. Specify layer names and layer types. If this is a group layer, you can fill out multiple layer names and types
 - a. Follow recommended naming conventions (will cover fully in later section)
 - b. Create a layer for:
 - i. Points
 - ii. Lines
 - iii. Polygons

Create a feature layer

Specify name and type

Tree	Point layer	
Canopy	Polygon layer	
Sidewalk	Line layer	

+ Add

Options

Add GPS metadata fields
Add fields to layers that support capturing GPS receiver information. ☐

Enable Z-values
Allows modeling point, polyline, and polygon features in 3D. ☐

Back Cancel Next

4. Follow recommended naming conventions (will cover fully in later section)
 - a. For this class we will use: initials_descriptive_name (no spaces)
5. Use concise and descriptive tags
 - a. Be sure to add an “IGIC 2026 Workshop” tag to each item for this class
6. Add a description that describes the dataset, its intended use, the source, etc
7. Click Save

Create a feature layer

Title

BG_Tree_Canopy_Sidewalk

Folder

irvgardenclub.ben

Tags

urban forestry

tree

canopy

sidewalk

IGIC 2026 Workshop

Add tags

Summary

A group layer dataset containing point, line, and polygon features. Point features represent trees, lines represent sidewalks, and polygons represent tree canopy cover. This dataset is for the IGIC 2026 Workshop presented by the IGIO.

235/2048

Back

Cancel

Save

8. View the item details page
 - a. Take note of the name, layers, description, tags, etc.
9. Click on the “Data” tab

BG_Tree_Canopy_Sidewalk

Overview

Data

Visualization

Usage

Settings

Finish setting up your layer

Describe your item below. Add fields on the Data tab. Configure editing on the Settings tab. Configure drawing and pop-ups through Map Viewer or the Visualization tab.



A group layer dataset containing point, line, and polygon features. Point features represent trees, lines represent sidewalks, and polygons represent tree canopy cover. This dataset is for the IGIC 2026 Workshop presented by the IGIO.

Feature layer (hosted)

Item updated: Apr 9, 2026

Description

An in-depth description of the item is not available.

Add a description

Layers

Tree

Point layer

Canopy

Polygon layer

Open in Map Viewer

Open in Scene Viewer

Share

Open in ArcGIS Pro

Owner

Ben Grubbs

irvgardenclub.ben

Details

View count

0

Source

Feature service

URL

https://services3.arcgis.co ...

Item information

Low

High

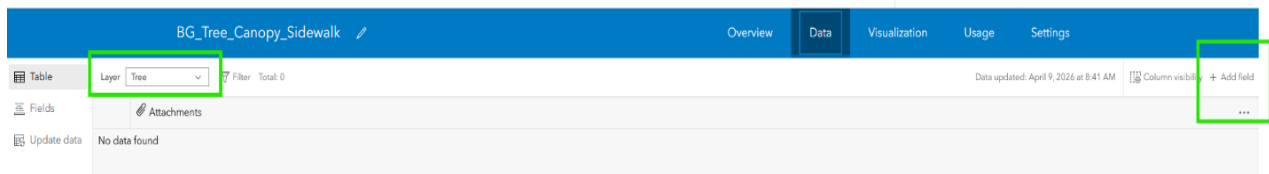
Top improvement

Page 6 of 20

Add new fields to the different layers

10.

- a. Select the layer of interest from the dropdown on the top-left of the page
- b. Select “Add field” on the top-right
 - i. This will allow you to create a new field for only the Tree (selected) point layer



11. In the Add field menu, select the appropriate data type for the field. We will select “string”, which is a text character data type. Click next

A screenshot of the 'Add field' dialog box. The dialog has a title bar with a close button. Inside, it says 'Select the data type that will be stored in the field'. There are four categories: Text, Numbers, Dates, and Global identifiers. The 'Text' category is expanded, showing 'String' as the selected option. The 'String' option is described as 'Store a set of alphanumeric characters of a specified length.' At the bottom right, there are 'Cancel' and 'Next' buttons.

12. In the next menu, define the field name (no spaces), display name (can use spaces, this is a field “alias”), character length limit, and description

Add field

String

Store a set of alphanumeric characters of a specified length.

abc

Field name

TreeSpecies

Display name

Tree Species

Length

256

^

v

☒ Allow null values

Default value (optional)

Field description (optional)

Enter tree species by common name

Back

Cancel

Add field

13. Add another field. This time select “Numbers” and integer as the data type. We will use this to create a field named “DBH”, which is a measurement of tree diameter at breast height

Add field [Close]

Select the data type that will be stored in the field

Text
Values that contain alphanumeric or special characters.

Numbers
Values that contain numeric information.

- ☐ **Double**
Store numbers with decimal places.
- ☒ **Integer**
Store whole numbers from -2,147,483,648 to 2,147,483,648.
- ☐ **Big Integer**
Store whole numbers from $-2^{53}-1$ to $2^{53}-1$. Use this field type when using numbers that are outside of the supported integer field range.

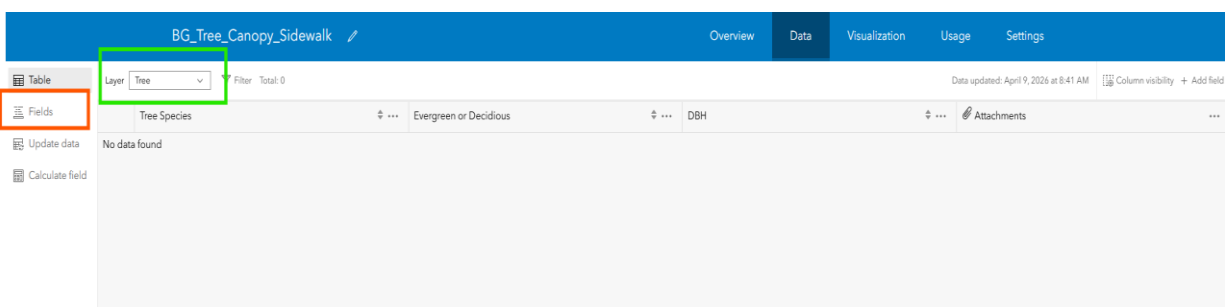
Dates
Values that contain temporal information.

Global identifiers
Values that uniquely identify a feature or table row.

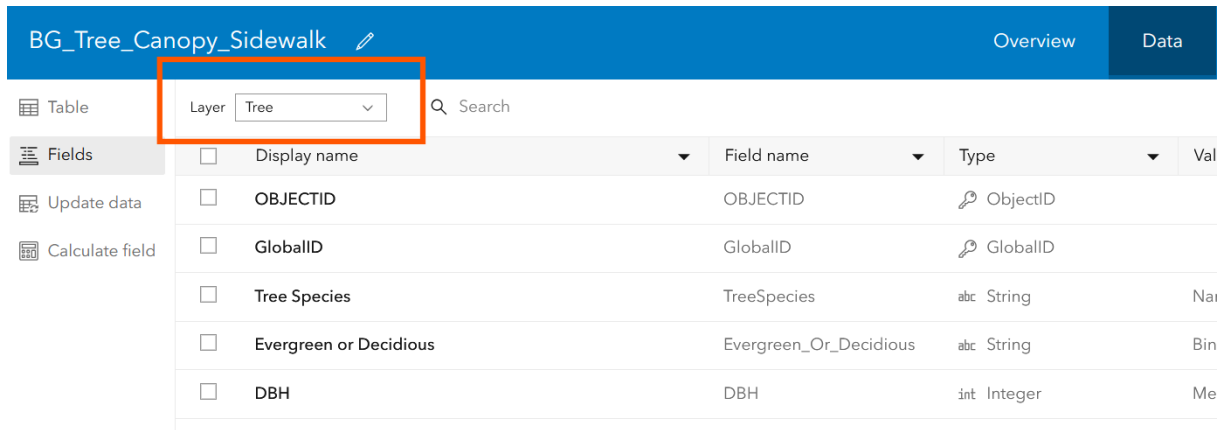
[Cancel] [Next]

Define and Enforce Field Domains

1. Go back to the data tab and view the newly created fields for the Tree layer.
 - a. Data tab > Fields > Layer Dropdown (Tree)

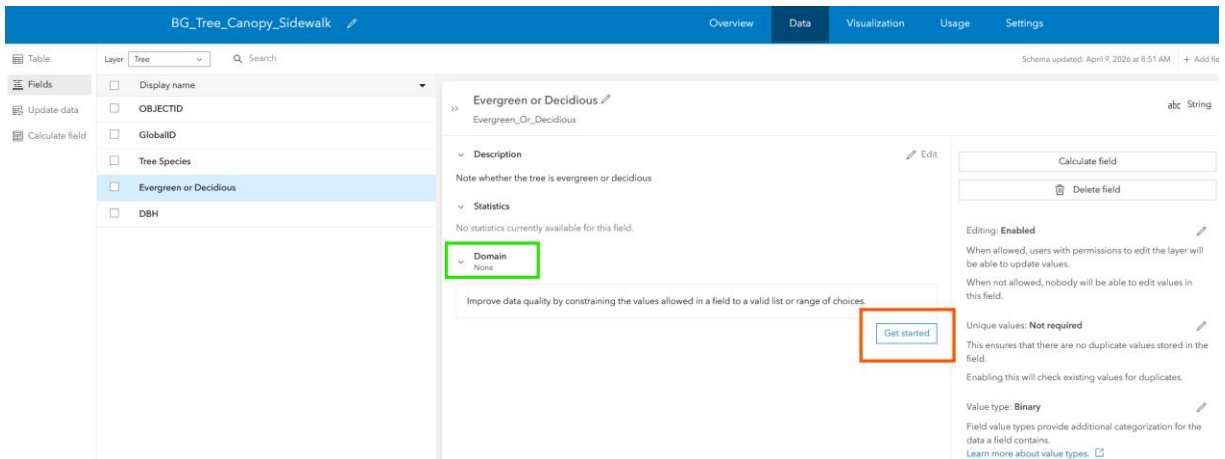


2. Within the fields view, select your field of interest and click the three dots on the right-hand side



BG_Tree_Canopy_Sidewalk		Overview	Data
Table	Layer: Tree	Search	
Fields	☐ Display name	Field name	Type
Update data	☐ OBJECTID	OBJECTID	ObjectID
Calculate field	☐ GlobalID	GlobalID	GlobalID
	☐ Tree Species	TreeSpecies	String
	☐ Evergreen or Deciduous	Evergreen_Or_Deciduous	String
	☐ DBH	DBH	Integer

3. Within the field properties menu, select “Domain” and then “Get Started”



Evergreen or Deciduous

Evergreen_Or_Deciduous

abc String

Domain

None

Improve data quality by constraining the values allowed in a field to a valid list or range of choices.

[Get started](#)

Editing: **Enabled**

When allowed, users with permissions to edit the layer will be able to update values.

When not allowed, nobody will be able to edit values in this field.

Unique values: **Not required**

This ensures that there are no duplicate values stored in the field.

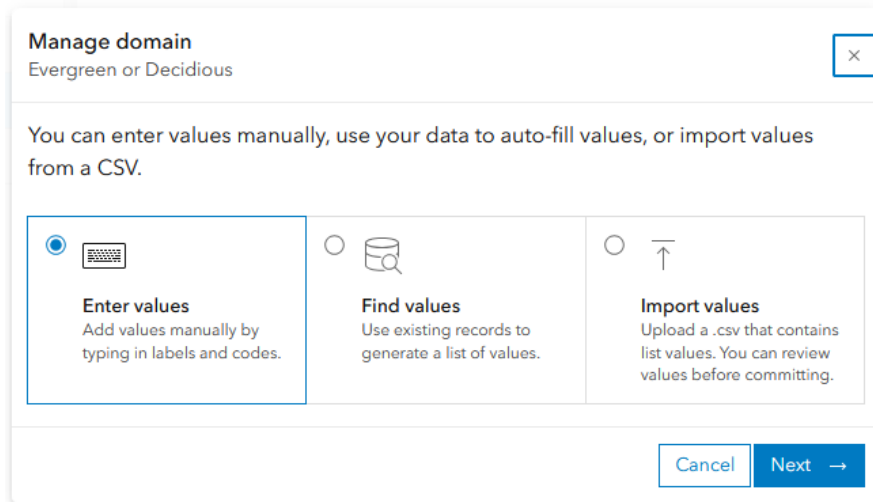
Enabling this will check existing values for duplicates.

Value type: **Binary**

Field value types provide additional categorization for the data a field contains.

[Learn more about value types.](#)

4. Within the domain menu, select “Enter values” and click next



The dialog box is titled "Manage domain" with a subtitle "Evergreen or Deciduous". It contains three options: "Enter values" (selected), "Find values", and "Import values". The "Enter values" option is highlighted with a blue border and a blue circle icon. The "Find values" option has a magnifying glass icon. The "Import values" option has an upload icon. At the bottom right are "Cancel" and "Next" buttons.

Manage domain
Evergreen or Deciduous

You can enter values manually, use your data to auto-fill values, or import values from a CSV.

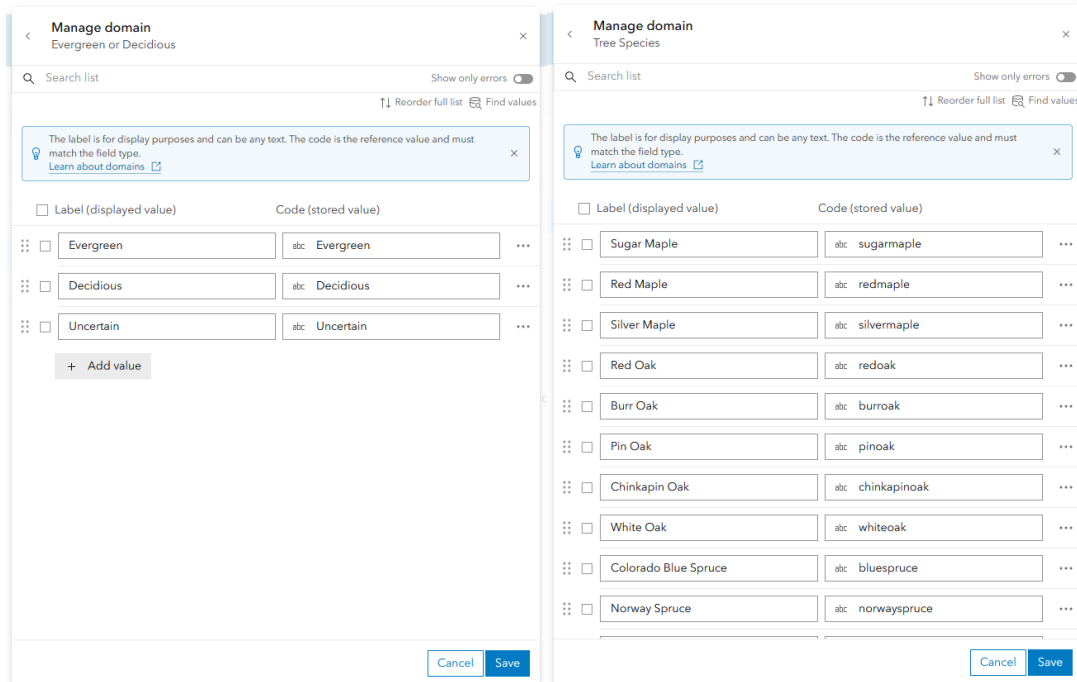
Enter values
Add values manually by typing in labels and codes.

Find values
Use existing records to generate a list of values.

Import values
Upload a .csv that contains list values. You can review values before committing.

Cancel Next →

5. Here, we will define the values that will be acceptable as records within this field. When a user adds a new record, they will be limited to the parameters we define here. For the Tree layer, we will add domains for:
 - a. Tree Species (string data type)
 - b. Evergreen or Deciduous (string data type)
 - c. DBH (integer data type)



The first screenshot shows the "Manage domain" dialog for "Evergreen or Deciduous". It displays a table with two columns: "Label (displayed value)" and "Code (stored value)". The table contains three rows: "Evergreen" (code: abc: Evergreen), "Deciduous" (code: abc: Deciduous), and "Uncertain" (code: abc: Uncertain). There is an "Add value" button at the bottom.

The second screenshot shows the "Manage domain" dialog for "Tree Species". It displays a table with two columns: "Label (displayed value)" and "Code (stored value)". The table contains ten rows: "Sugar Maple" (code: abc: sugarmaple), "Red Maple" (code: abc: redmaple), "Silver Maple" (code: abc: silvermaple), "Red Oak" (code: abc: redoak), "Burr Oak" (code: abc: burroak), "Pin Oak" (code: abc: pinoak), "Chinkapin Oak" (code: abc: chinkapinoak), "White Oak" (code: abc: whiteoak), "Colorado Blue Spruce" (code: abc: bluespruce), and "Norway Spruce" (code: abc: norwayspruce). There are "Cancel" and "Save" buttons at the bottom.

Table Layer: Tree Search

Fields

- ☐ Display name
- ☐ OBJECTID
- ☐ GlobalID
- ☐ Tree Species
- ☐ Evergreen or Deciduous
- ☒ DBH

DBH

DBH

Description

Enter the tree diameter at breast height (DBH)

Statistics

No statistics currently available for this field.

Domain

Range

min: 1 max: 60

6. Do the same for your other layers within the group layer (the rest of your points, lines, polygons layers)
 - a. For the Canopy layer, add domains for the Canopy Health field

Layer: Canopy Search

Canopy Health

CanopyHealth

Description

Enter an assessment of the canopy health

Statistics

Top values	Count
Good	1

Domain

List

Value count: 4

Label (displayed value)	Code (stored value)
Poor	poor
Good	good
Excellent	excellent
Dead or Dying	deadordying

- b. For the Sidewalk layer, add domains for Sidewalk Condition and Accessibility Status

BG_Tree_Canopy_Sidewalk  Overview Data

Table Layer Sidewalk  Search

Fields Update data Calculate field

☐	Display name	Field name	Type
☐	OBJECTID	OBJECTID	ObjectID
☐	GlobalID	GlobalID	GlobalID
☐	Shape_Length	Shape_Length	123 Double
☐	Sidewalk Condition	SidewalkCondition	abc String
☐	Accessibility Status	AccessibilityStatus	abc String

Sidewalk Condition 

SidewalkCondition

Description

Enter an assessment of the sidewalk condition

Statistics

Top values	Count
Excellent	1

Domain

List

Value count: 3

Label (displayed value)	Code (stored value)
Needs Repair	needsrepair
Good	good
Excellent	excellent

Accessibility Status 

AccessibilityStatus

Description

Note whether the sidewalk is wheelchair accessible

Statistics

Domain

List

Value count: 2

Label (displayed value)	Code (stored value)
Accessible	accessible
Not Accessible	notaccessible

Upload CSV

Another method of creating content in AGOL is to upload and geocode a spreadsheet. The spreadsheet needs to have at least one location column (columns become fields in geospatial data). We will use a CSV file containing a list of Bloomington Restaurants and their corresponding addresses

1. Obtain a local copy of the CSV file. This file can be found in the [IGIC_2026_Workshop](#) group, and the item details page can be found [here](#). Download it directly to your computer so we can practice publishing the file as a feature layer, which will then be geocoded based on the address field. First, let's open the file to check that it contains at least one location column/field. Close the file before uploading

Business Name	Address
Uptown Cafe	102 E Kirkwood Ave, Bloomington, IN 47408
Runcible Spoon Cafe and Restaurant	412 E 6th St, Bloomington, IN 47408
Mother Bear's Pizza	1428 E 3rd Street Suite 439, Bloomington, IN 47401
Lennie's	1795 E 10th St, Bloomington, IN 47408
Farm Bloomington	108 E Kirkwood Ave, Bloomington, IN 47408
My Thai Cafe	3316 West Third Street, Bloomington, IN 47404
Upland Brewing Company	350 W 11th St, Bloomington, IN 47404
Janko's Little Zagreb	223 W 6th St, Bloomington, IN 47404
The Irish Lion Restaurant & Pub	212 W Kirkwood Ave, Bloomington, IN 47404
Trojan Horse Restaurant	100 E Kirkwood Ave, Bloomington, IN 47408
Sweet Grass	405 W Patterson, Bloomington, IN 47403
Nick's English Hut	423 E Kirkwood Ave, Bloomington, IN 47408
Siam House	430 E 4th St, Bloomington, IN 47408
Scotty's Brewhouse	302 N Walnut St, Bloomington, IN 47404
Dats	211 S Grant St, Bloomington, IN 47408
Anatolia	405 E 4th St, Bloomington, IN 47408
Bub's Burgers & Ice Cream	480 N. Morton, Bloomington, IN 47404
Village Deli	409 E Kirkwood Ave, Bloomington, IN 47408
The Owlery Restaurant	118 W 6th St, Bloomington, IN 47404
Choclate Moose	401 S Walnut St, Bloomington, IN 47401

2. Return to the Content tab. Select “New item”. This time, we will select “Upload a file”. Click next. Upload your file
 - a. Note that this could be other files such as images, PDF, excel, word doc, etc. But we will focus on CSV

Create a feature layer

Select an option to create an empty feature layer.

- ☐ Define your own layer
Specify the layers and tables.
- ☐ Select an existing feature layer
Use the layers and fields from an existing feature layer in your organization.
- ☐ Use a template
Use the layers and fields from a template.
- ☐ Provide an ArcGIS Server layer URL
Use the layer and fields from an ArcGIS Server feature layer.
- ☒ Upload a file
Use the layers, fields, and the data contained in a CSV, Excel, Shapefile or other supported file type.

Back Cancel Next

3. Check the fields that were derived from your spreadsheet columns. Make sure the location field is present

Create a feature layer

Fields

Select the fields that will be included in the hosted feature layer. Optionally, update the display name and field type.

Search for field

All types

2 selected

Clear selection

☒ Field name	Display name	Type
☒ Business_Name	Business Name	String
☒ Address	Address	String

Back

CancelNext

4. For this dataset, the location info is in one field (Address). In other situations, you may have additional location fields such as zip code, city, county, state, etc
 - a. Take note of the credits being used for this process. Geoprocessing tasks, such as geocoding and spatial analysis operations will cost credits. Other general use such as publishing data and creating applications does not use credits

Create a feature layer

Addresses or place names

Location data is addresses, place names, postal codes, and countries. May consume credits.

>

Advanced location settings

Location fields *

☒ Location information is in one field.
☐ Location information is in multiple fields.

Location type

Field

Address or Place

Address

Credit estimate

Credits needed: 10.84
2.17%

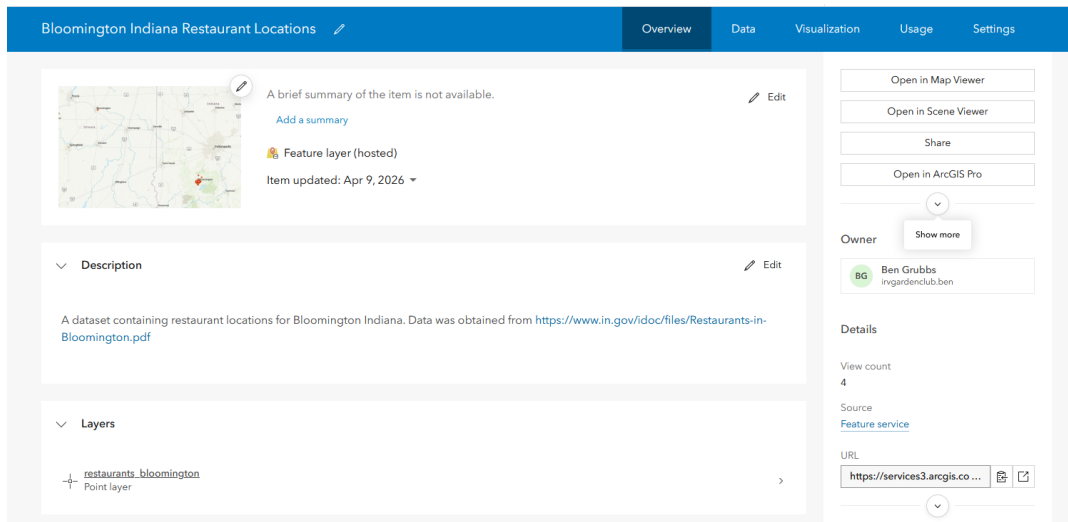
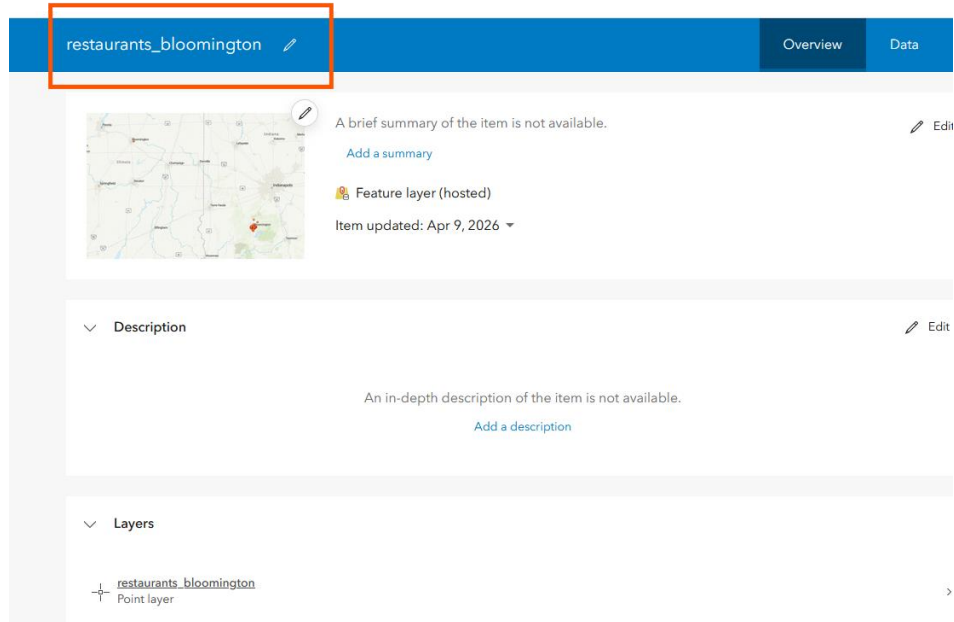
10.84
Credits needed

Back

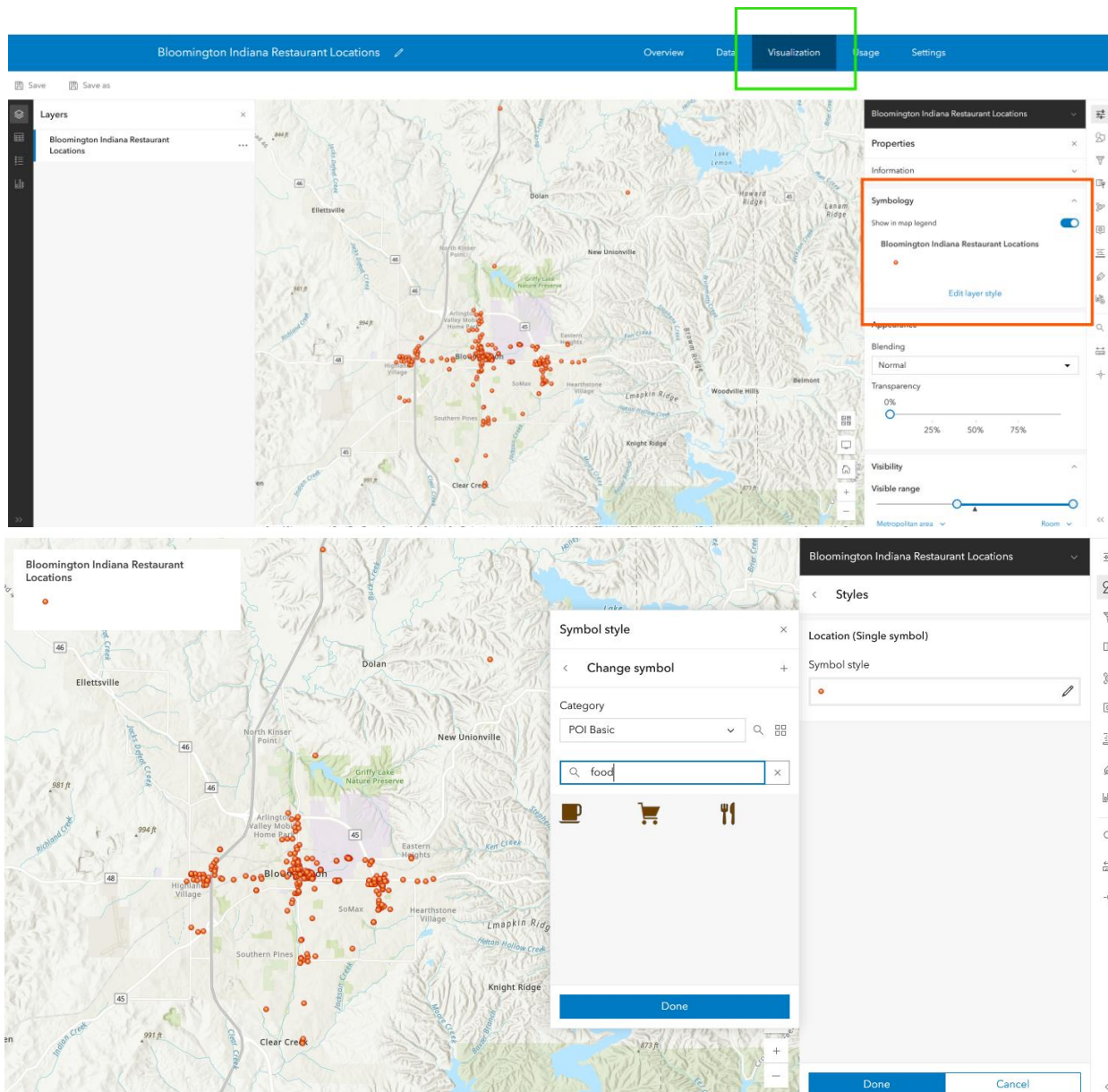
CancelNext

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5. Rename the dataset to something more human-friendly
 - a. Bloomington Indiana Restaurant Locations

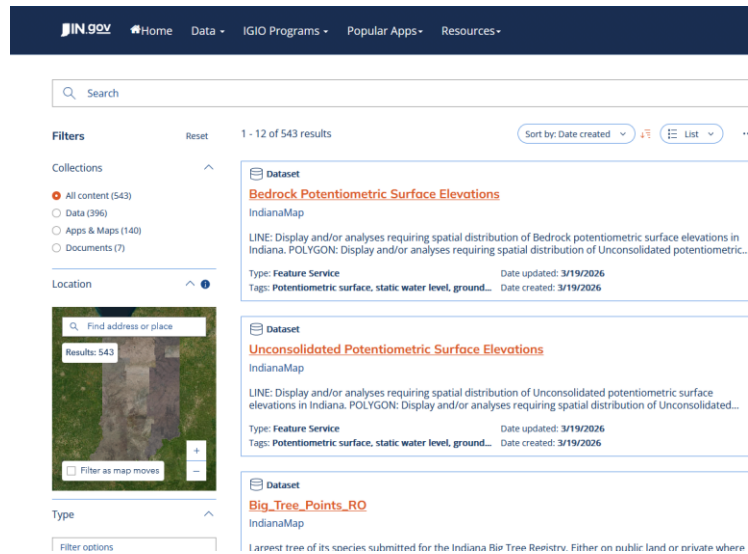


6. Open the “Visualization” tab so we can adjust the symbology for this dataset
 - a. Make sure the layer is selected (blue highlight)
 - b. On the right-hand vertical toolbar, select the “Styles” option
 - c. Select “edit layer style” and search for a relevant symbol. Modify the color to something appropriate

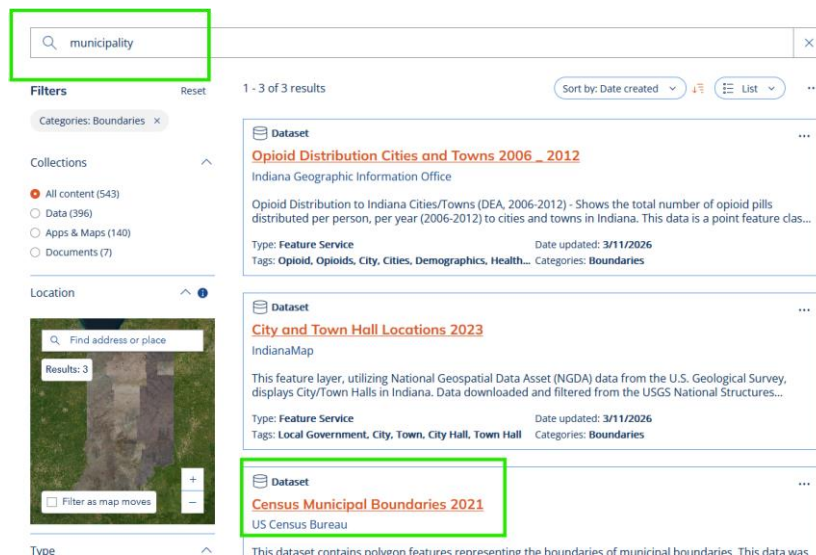


Upload Shapefile

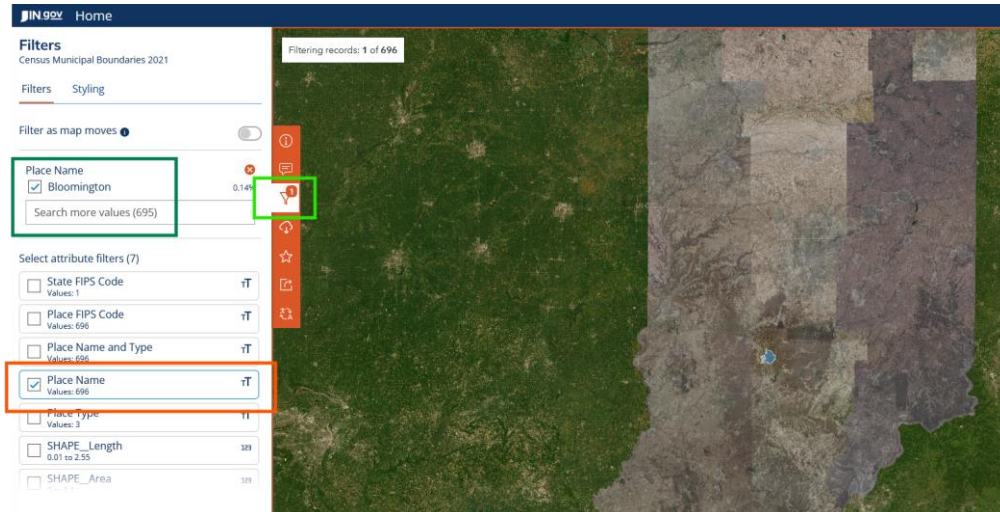
1. We can obtain a shapefile by downloading a dataset from IndianaMap. Navigate to IndianaMap.org and find the data catalog



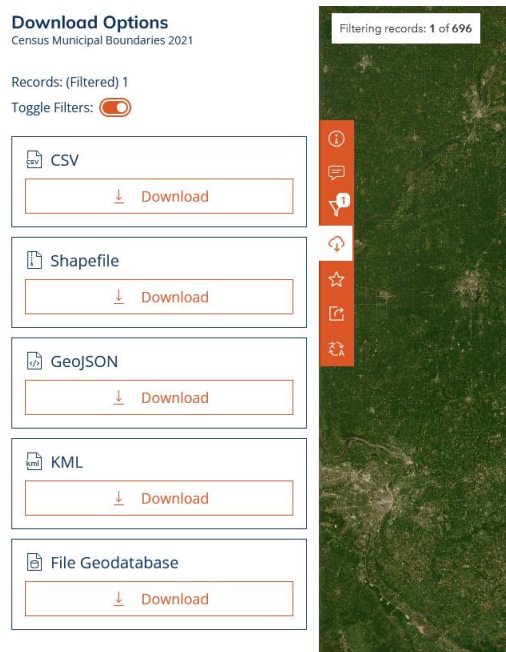
2. Search for “municipal boundaries” and find the Census Municipal Boundaries 2021 dataset. Click the link to the dataset



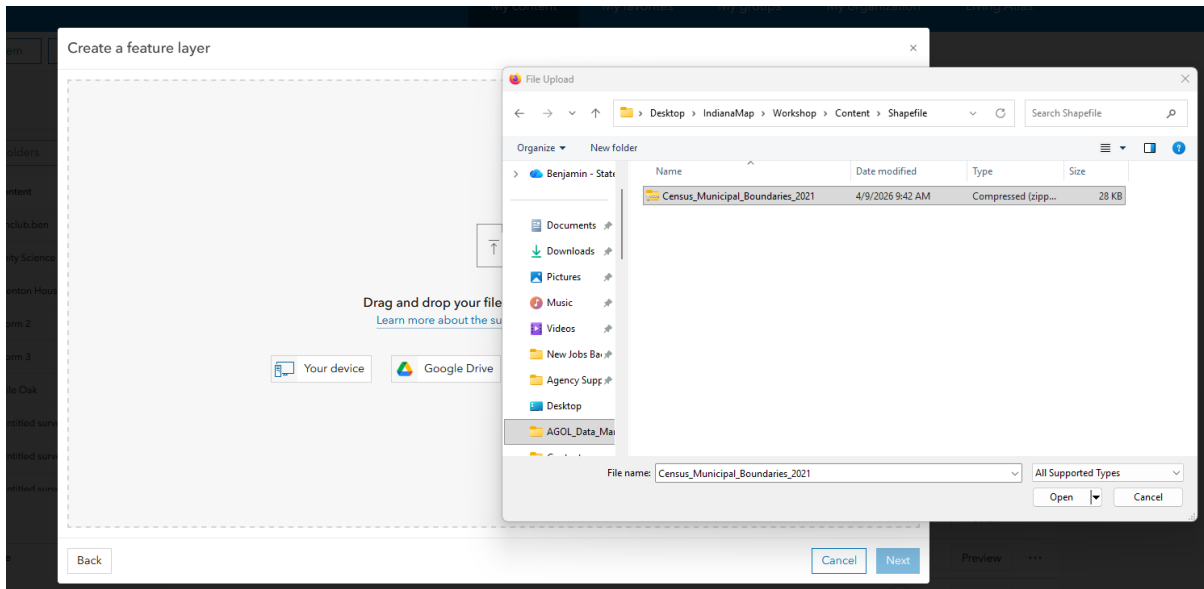
3. Use the filter option, located on the left-hand side in the vertical orange toolbox
4. Select Place Name as the field to be filtered and enter “Bloomington” as the value



5. In the vertical orange toolbar, click the download icon (just below the filter icon)
6. Select “Toggle Filters” to apply the filter selection
7. Choose your preferred download format and click Download. In this case, we will download a shapefile. This download will be zipped by default



8. Go back to your AGOL Content page and add a new item. Upload the zipped shapefile (it must be zipped)



Add these datasets to the Web Map

1. In AGOL, open up the web map containing the flood zones, parcels, etc
2. Once we are viewing this web map, we can add our new layers to the map and save over the existing web map or do a “save as” to create a new web map containing all layers
3. For this class, we will “save as” a new web map
 - a. Name it: initials_igic_final_webmap_2026
 - i. BG_IGIC_Final_Webmap_2026
4. We will use this web map for the following lesson where we will create various AGOL applications