

ArcGIS Experience Builder Developer Edition 1.12

Complete Tutorial – Part 2

Contents

Overview	2
Start a new Experience Builder Session.....	3
Create Historical Aerials v4	6
Add the Table Widget.....	9
Add Actions to the Table Widget.....	40
Add the Query Widget.....	50
Add the Parcel Query	55
Add the Subdivision Query	78
Add the ZIP Code Query	85
Add the City Query	89
Add the Township, Range, Section Query	92
Add Actions to the Query Widget	119
Close this Experience Builder Session	135

Overview

In **Part-2**, you will learn how to add the Table and Query Widgets and configure them.

Start a new Experience Builder Session

Before you can launch a new Experience Builder session, you must start the npm Server process.

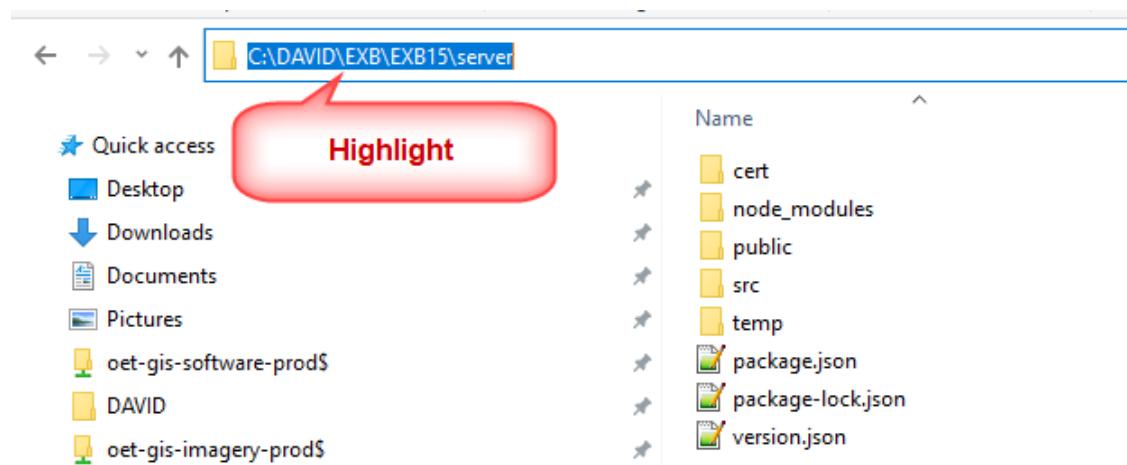
Note: There is no need to start the npm Client process unless you are adding Custom Widgets.

Navigate to C:\DAVID\EXB\EXB15

client	9/4/2023 6:54 PM	File folder
server	9/4/2023 7:57 PM	File folder
3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
version.json	9/4/2023 4:52 PM	JSON File 1 KB

Open the server folder.

Highlight the path and enter cmd

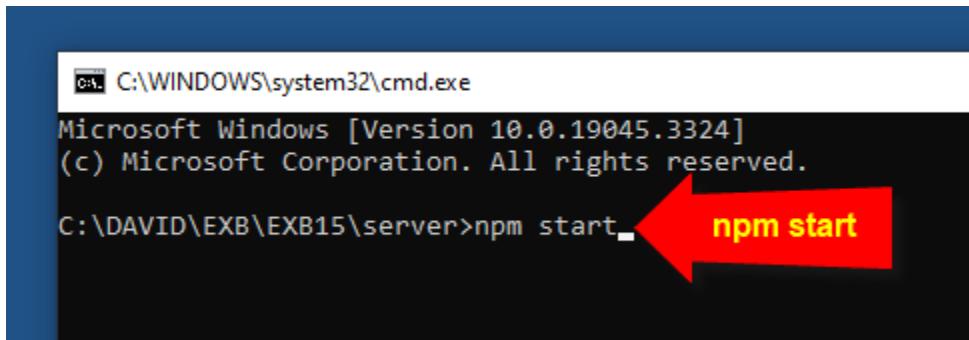


This will open a Command Window with the correct path:

```
C:\> C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\server>
```

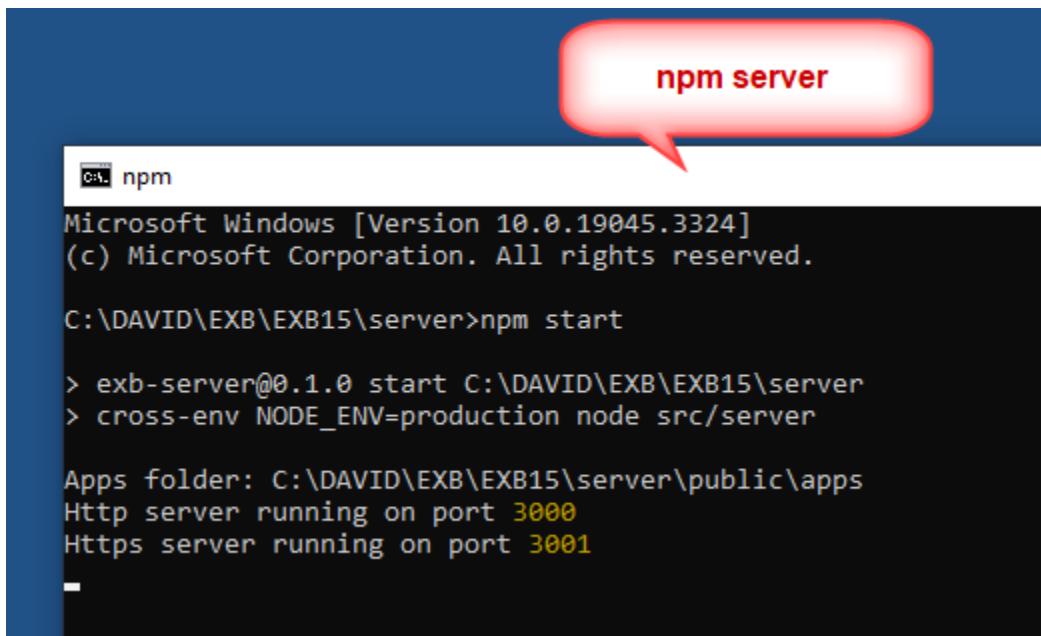
Enter **npm start**



C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\server>npm start

A red arrow points from the text "npm start" back towards the left side of the screen, indicating where the user should type the command.

This starts the npm server process.



npm
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\server>npm start
> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

Apps folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001

A red speech bubble contains the text "npm server", positioned above the command prompt window.

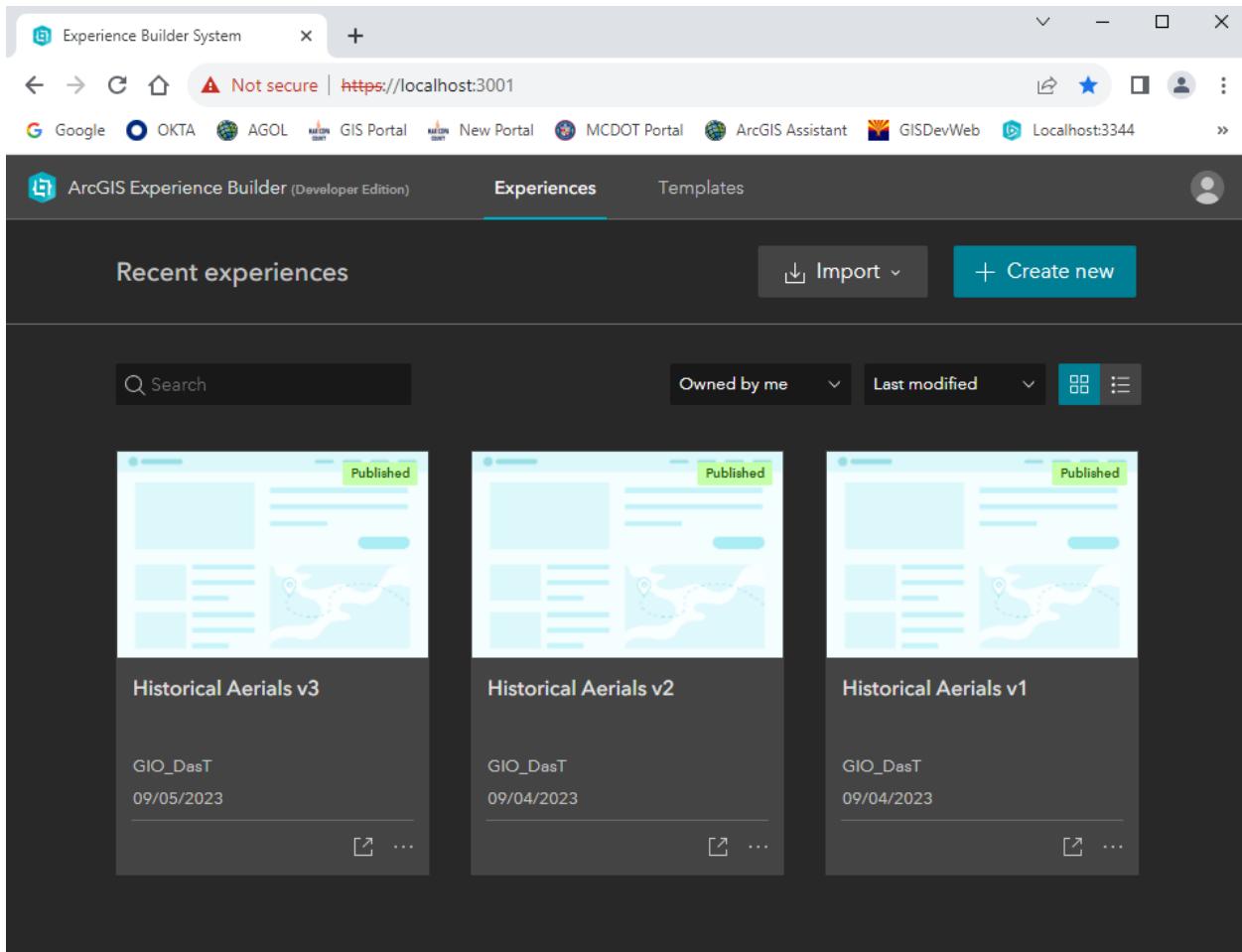
Open Chrome and enter:

<https://localhost:3001>

This launches the Experience Builder.

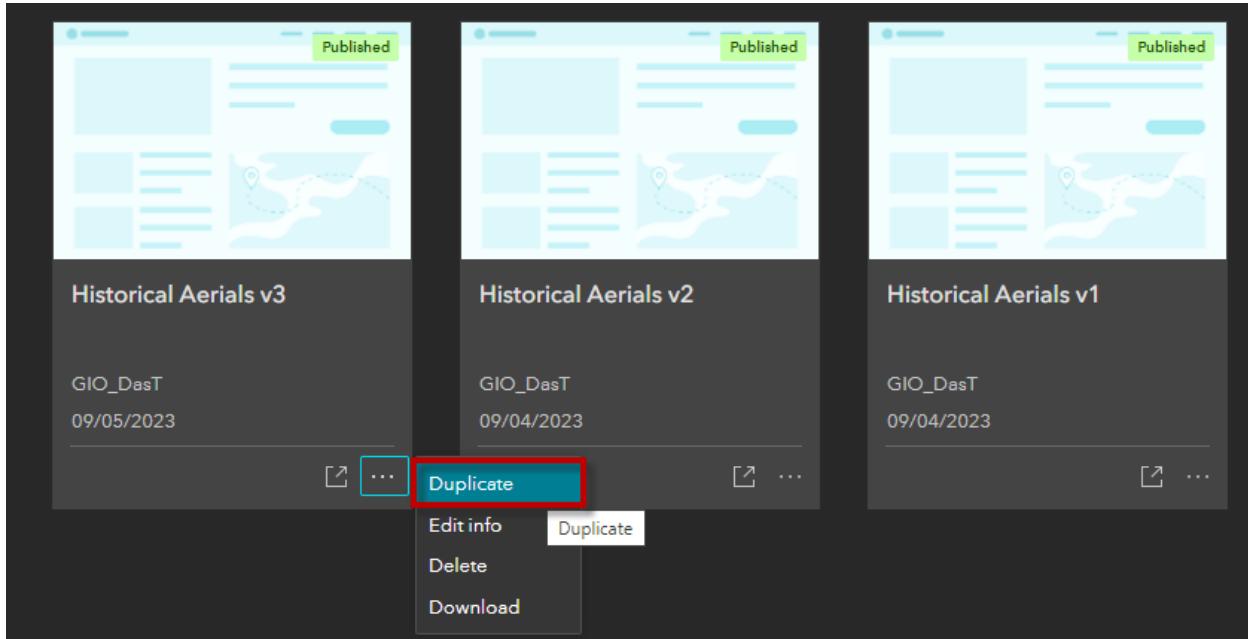
It does not ask you to reenter your credentials.

You are back to where you left after taking your break.

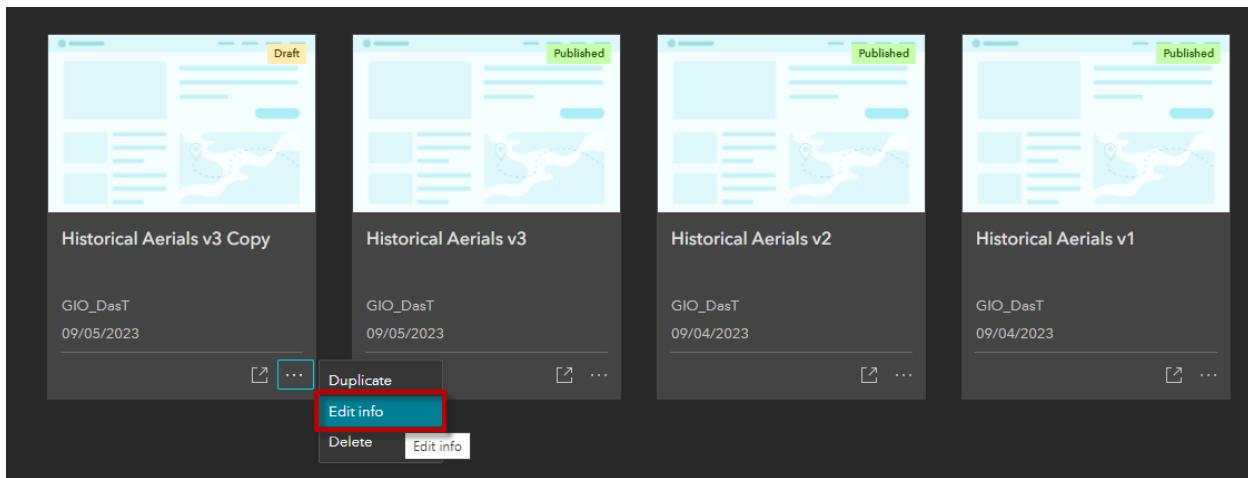


Create Historical Aerials v4

Duplicate Historical Aerials v3 to create Historical Aerials v4

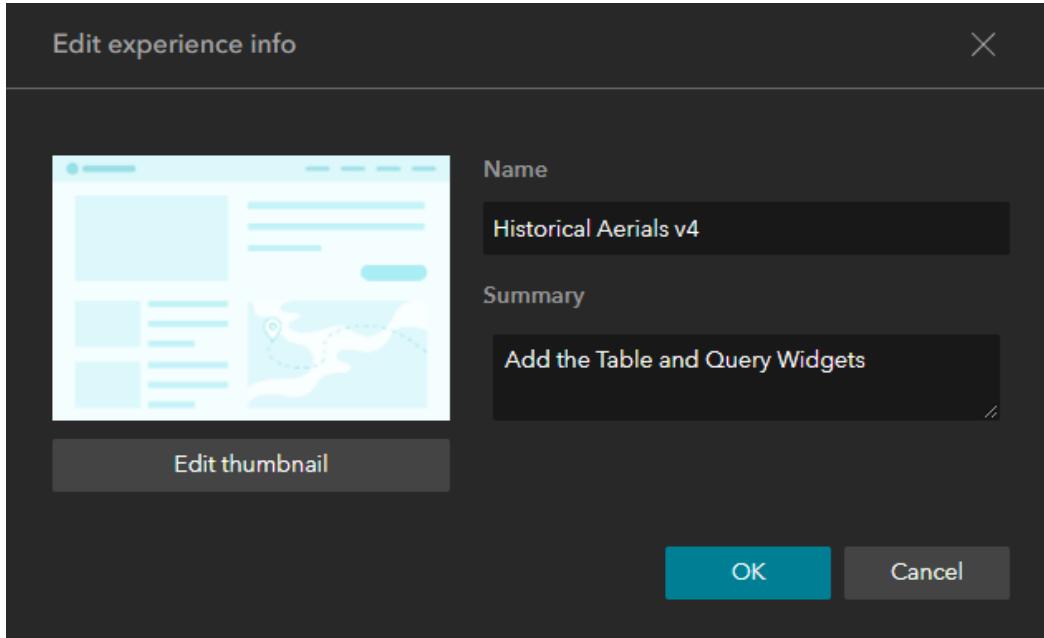


Edit Info

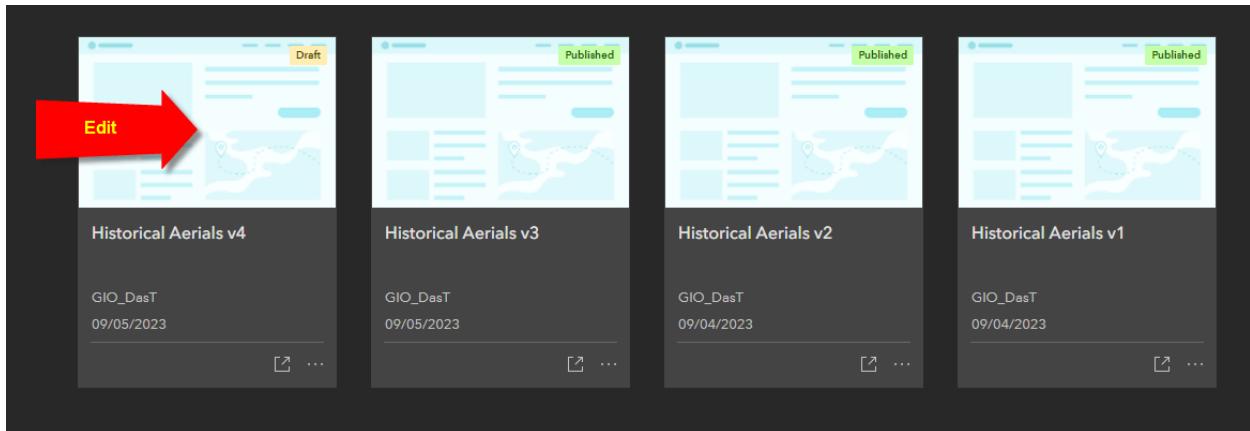


Name = Historical Aerials v4

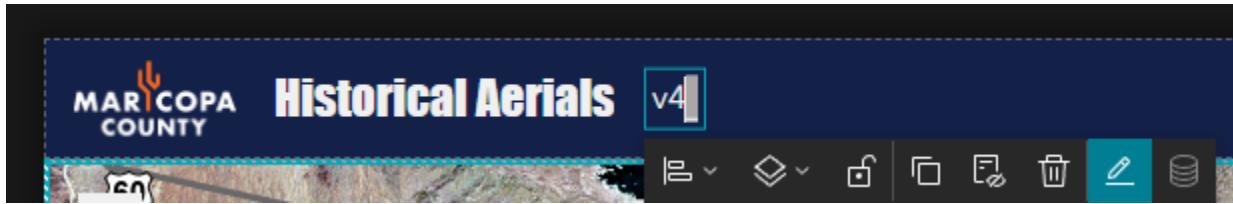
Summary = Add the Table and Query Widgets



Edit Historical Aerials v4



Change the Subtitle to v4



Expand the bottom Sidebar

A red callout bubble with the word "Expand" is pointing to the bottom sidebar of the application window.

The sidebar contains a list of historical aerial imagery periods:

- Terrain (NAVD88)
- Parcel (Current)
- Zip Code
- City
- Township Range Section
- Street
- 2022 Sep - 2022 Oct
- 2021 Sep - 2021 Nov
- 2020 Oct - 2020 Nov
- 2019 Sep - 2019 Dec
- 2018 Sep - 2018 Dec
- 2017 Sep - 2017 Nov
- 2016 Sep - 2016 Dec
- 2015 Nov - 2016 Feb
- 2014 Sep - 2014 Nov
- 2013 Sep - 2013 Nov
- 2012 Oct - 2012 Dec
- 2011 Sep - 2011 Oct
- 2010 Sep - 2010 Oct
- 2010 Jun - 2010 Sep Statewide

Add the Table Widget

Drag the Table Widget into the Bottom Sidebar widget as shown.

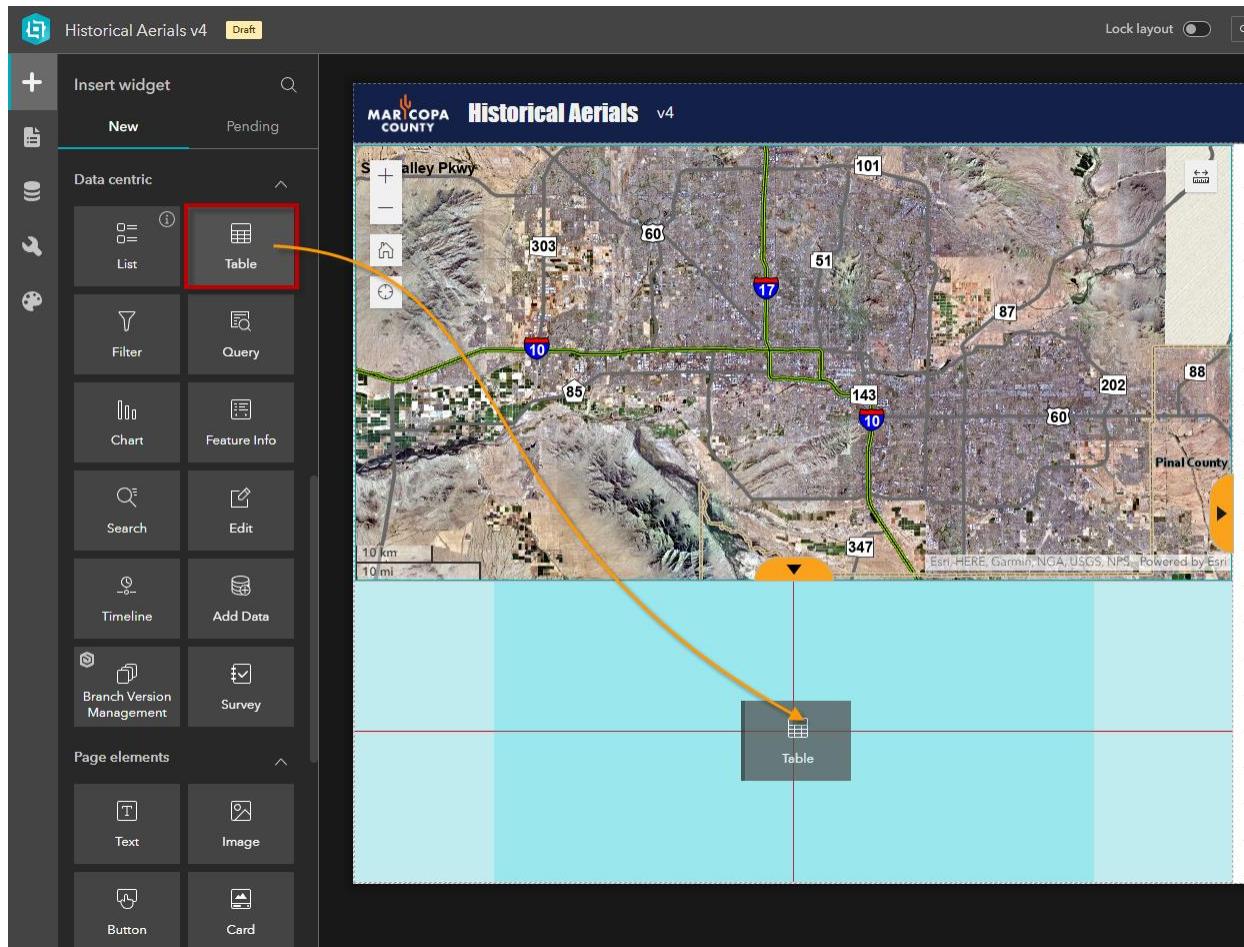


Table Widget

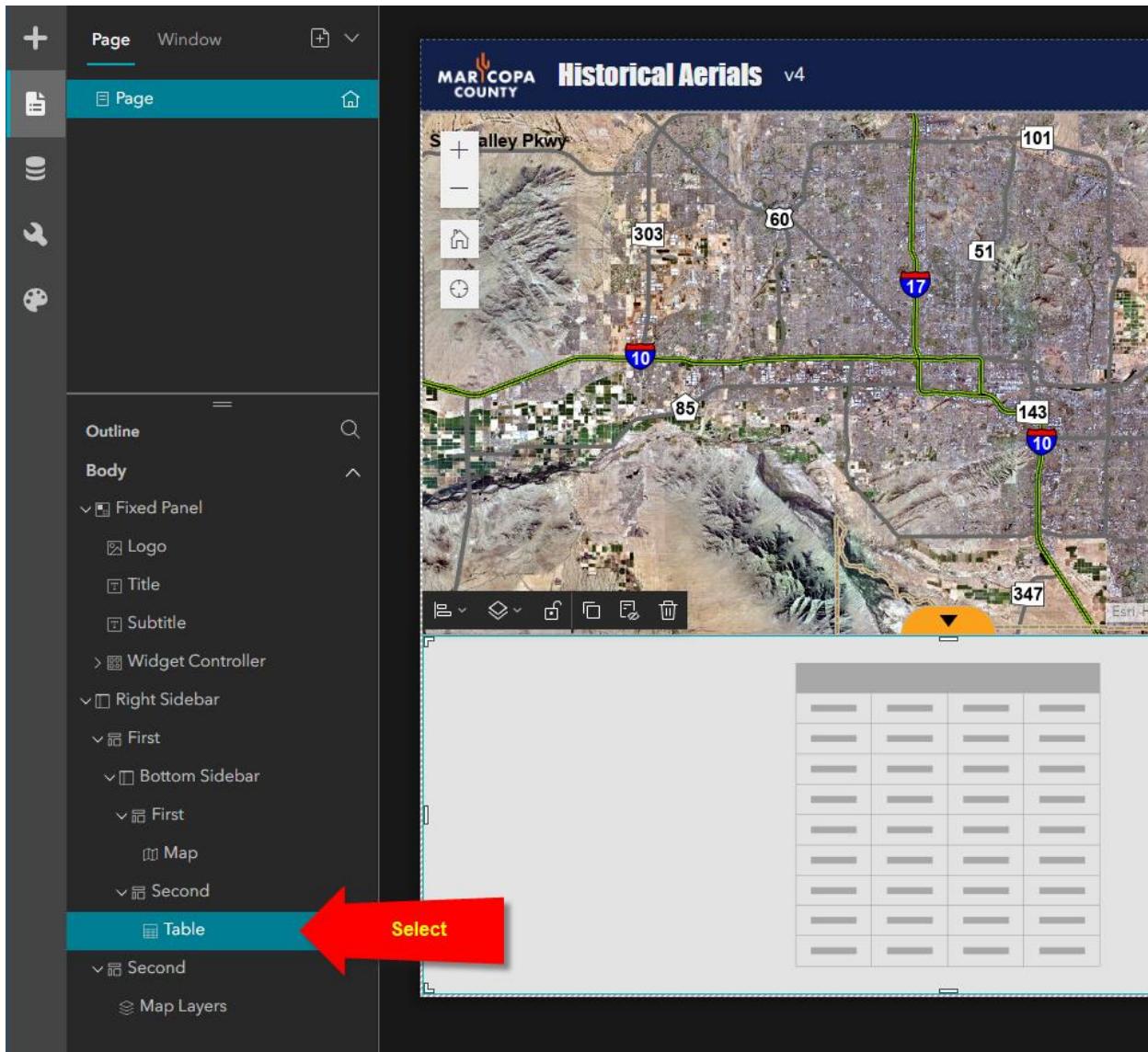
- > Terrain (NAVD88)
- > Parcel (Current)
- > Zip Code
- > City
- > Township Range Section
- > Street
- > 2022 Sep - 2022 Oct
- > 2021 Sep - 2021 Nov
- > 2020 Oct - 2020 Nov
- > 2019 Sep - 2019 Dec
- > 2018 Sep - 2018 Dec
- > 2017 Sep - 2017 Nov
- > 2016 Sep - 2016 Dec
- > 2015 Nov - 2016 Feb
- > 2014 Sep - 2014 Nov
- > 2013 Sep - 2013 Nov
- > 2012 Oct - 2012 Dec
- > 2011 Sep - 2011 Oct
- > 2010 Sep - 2010 Oct
- > 2010 Jun - 2010 Sep Statewide

Align Full Size

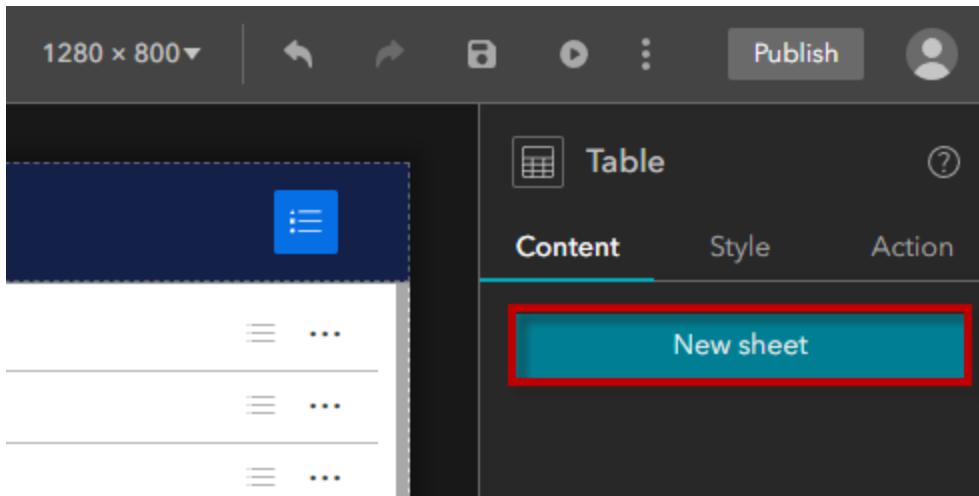
Full Size

- ← Snap to left
- Horizontal center
- Snap to right
- ↑ Snap to top
- ↑ Vertical center
- ↓ Snap to bottom
- ↔ Full width
- ↔ Full height
- ↔ Full size**

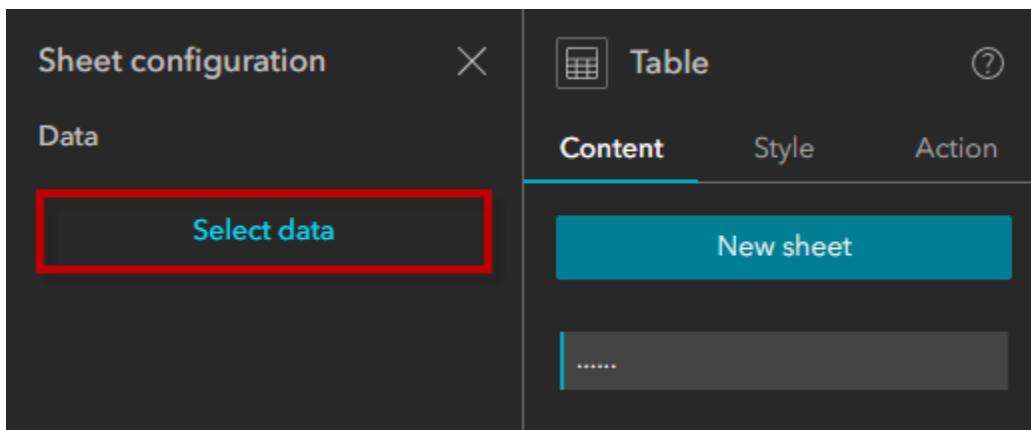
Select the Table Widget from the Page Outline.



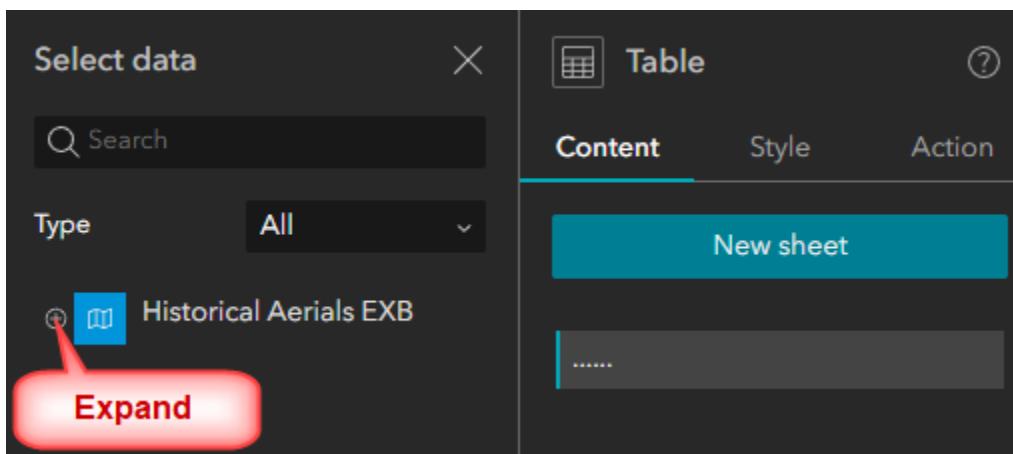
Select New Sheet



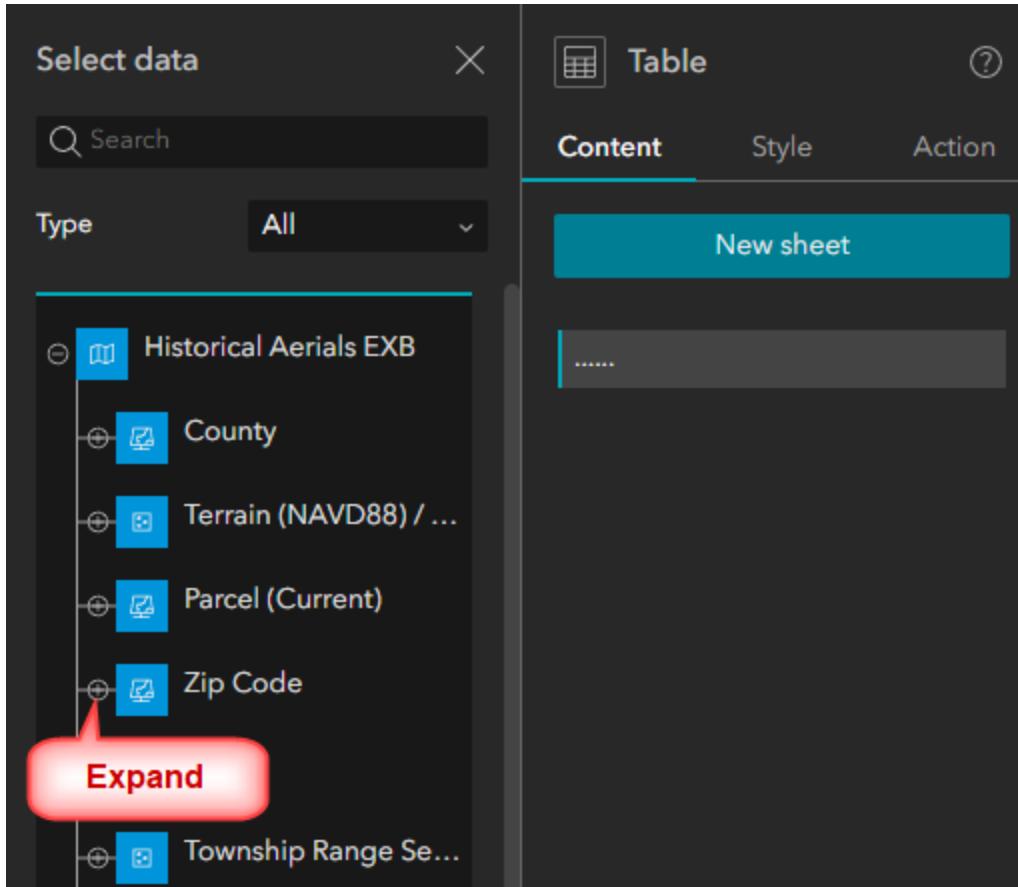
Select Data



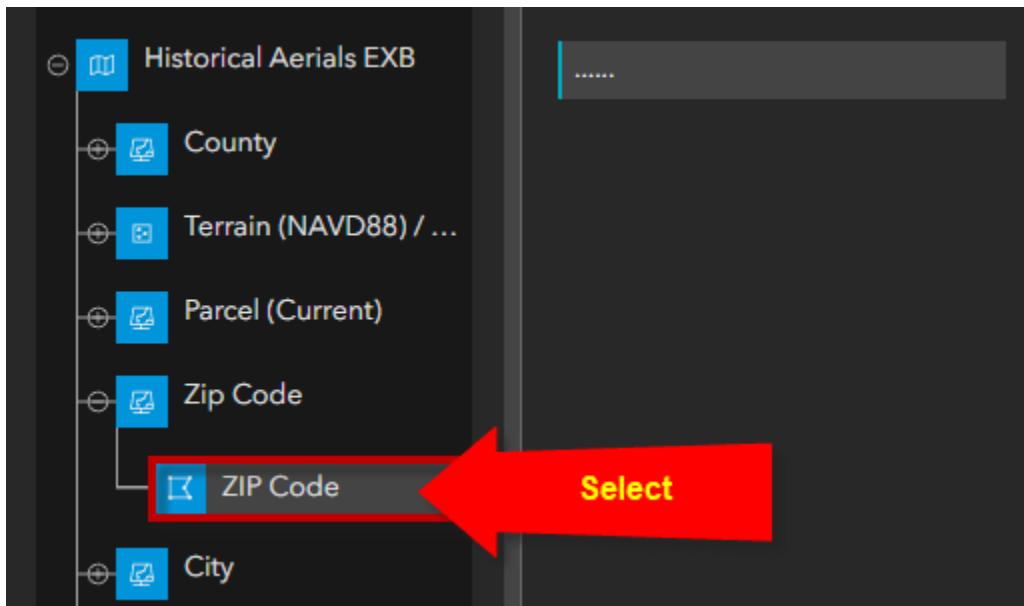
Expand Historical Aerials EXB



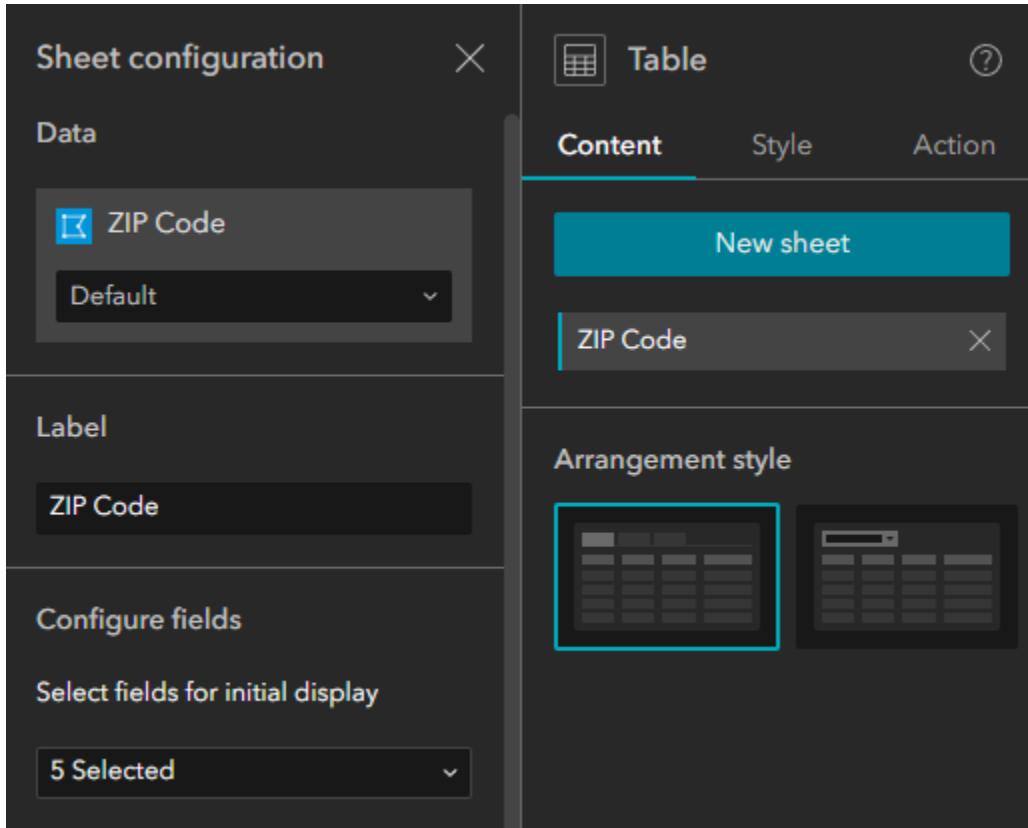
Expand Zip Code



Select ZIP Code



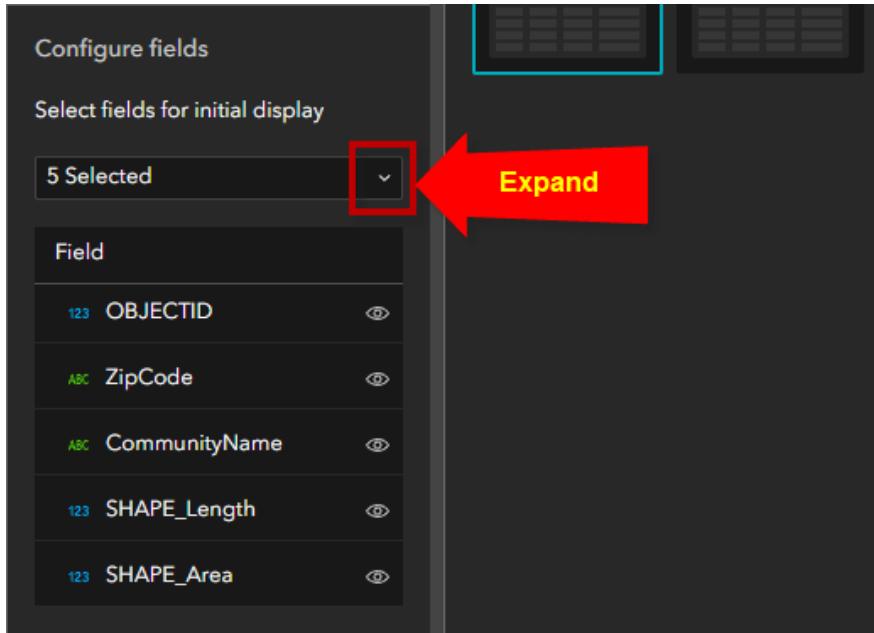
You will see this interface for configuring the ZIP Code layer.



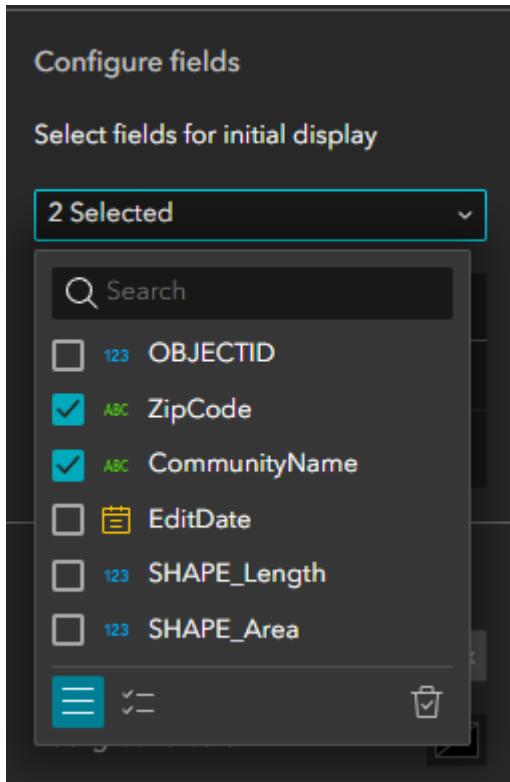
The screenshot shows the ArcGIS Pro ribbon at the top with various icons. Below it is a table view of ZIP Code data. The table has columns: OBJECTID, ZipCode, CommunityName, SHAPE_Length, and Shape. The data rows are:

OBJECTID	ZipCode	CommunityName	SHAPE_Length
1	85309	LUKE AIR FORCE BASE	15,934.061735071844
2	85355	WADDELL	51,795.851240439195
3	85250	SCOTTSDALE	19,820.428760174473
4	85322	ARLINGTON	94,046.95613720799
5	85381	ELM CITY	34,423.07847817800

Expand the down-arrow to see a list of fields.



Uncheck everything except ZipCode and CommunityName



Note: There is no way to rename the fields, but you can change the order.

Sheet configuration

Data

- ZIP Code
- Default

Label

ZIP Code

Configure fields

Select fields for initial display

2 Selected

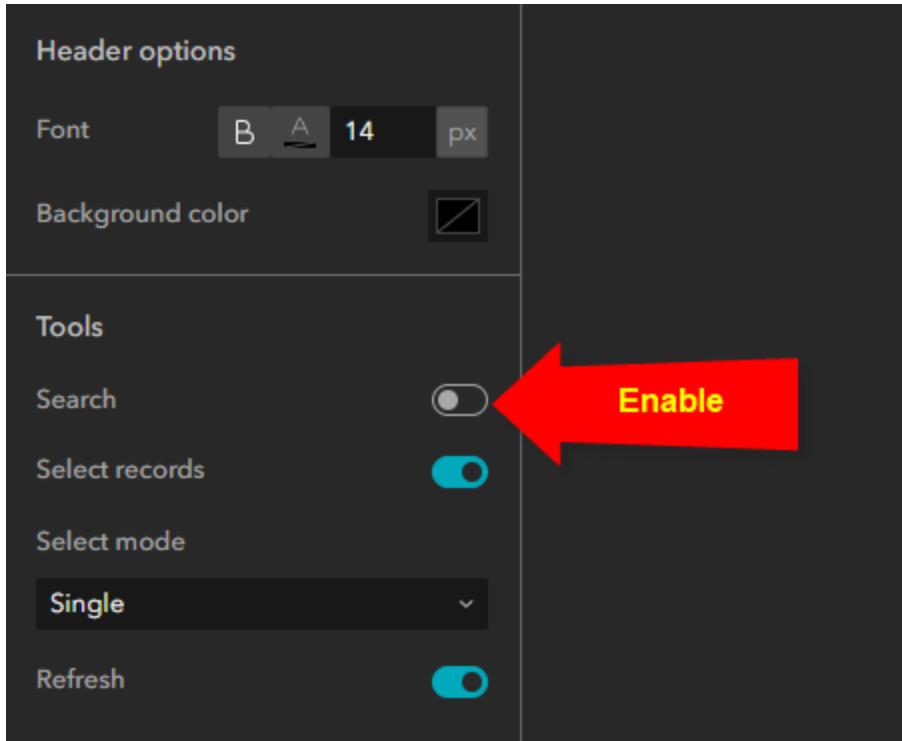
Field

ABC ZipCode	eye icon
ABC CommunityName	eye icon

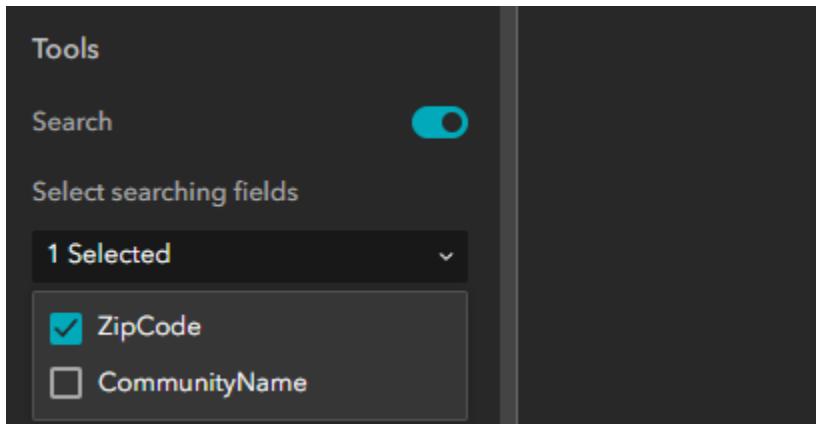
ZIP Code

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

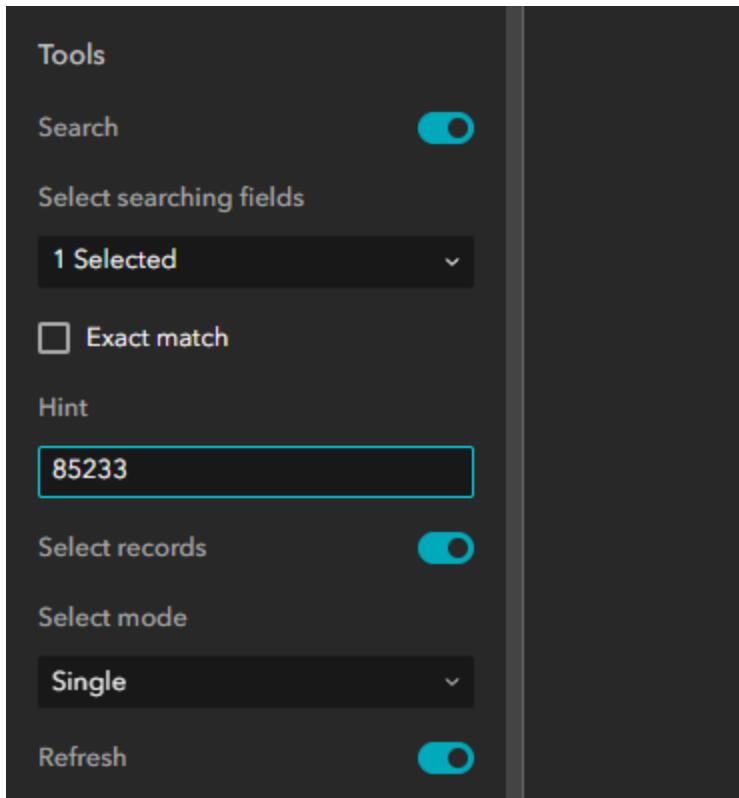
Enable Search



Select ZipCode as your Search Field



Hint = 85233



The screenshot shows the search results for ZIP code 85233. A red arrow points to the search bar which contains '85233' and the word 'Hint' in yellow. The results table has two columns: 'ZipCode' and 'CommunityName'. The data is as follows:

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Save

Publish

[View Published Item](#)

<https://localhost:3001/experience/3/>

Expand the bottom Sidebar to reveal the Table widget.

The screenshot displays the Maricopa County Historical Aerials v4 interface. The main area is a satellite map of the Phoenix metropolitan region, showing a dense grid of streets and major highways (I-17, I-10, I-1043). A red speech bubble with the word "Expand" is positioned over the bottom sidebar. The sidebar itself is a vertical list of historical aerial imagery options, each preceded by a checkbox. Most items are unchecked except for "Street" and "2022 Sep - 2022 Oct", which are checked and highlighted in blue. The sidebar also includes a small icon of three horizontal lines and three dots at the top right.

Historical Aerial Options	Status
Terrain (NAVD88)	unchecked
Parcel (Current)	unchecked
Zip Code	unchecked
City	unchecked
Township Range Section	unchecked
Street	checked
2022 Sep - 2022 Oct	checked
2021 Sep - 2021 Nov	unchecked
2020 Oct - 2020 Nov	unchecked
2019 Sep - 2019 Dec	unchecked
2018 Sep - 2018 Dec	unchecked
2017 Sep - 2017 Nov	unchecked
2016 Sep - 2016 Dec	unchecked
2015 Nov - 2016 Feb	unchecked
2014 Sep - 2014 Nov	unchecked
2013 Sep - 2013 Nov	unchecked

This is how your Table appears:

The screenshot shows the Maricopa County Historical Aerials v4 application. At the top left is the county logo and the title "Historical Aerials v4". On the right is a legend with several items checked, including "Street" and "2022 Sep - 2022 Oct". Below the map is a table titled "ZIP Code" with a search bar containing "85233". The table lists ZIP codes and their corresponding community names.

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Select any record by clicking on it.

The screenshot shows the same application interface as above, but with a red arrow pointing to the row for ZIP code 85250, which corresponds to SCOTTSDALE. The word "Select" is written in yellow on the arrow.

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Open the Action Menu and Select **Zoom To**.

The screenshot shows a map interface with a search bar for 'ZIP Code' containing '85233'. Below the search bar is a table with columns 'ZipCode' and 'CommunityName'. The row for ZipCode 85250 (CommunityName: SCOTTSDALE) is selected. A red arrow points to the 'Action Menu' icon (two overlapping squares) in the top right corner of the table header. A context menu is open, with 'Zoom to' highlighted.

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

The map zooms to ZipCode 85250.

Open the Action Menu and Select **Show on Map**.

The screenshot shows a map interface with a search bar for 'ZIP Code' containing '85233'. Below the search bar is a table with columns 'ZipCode' and 'CommunityName'. The row for ZipCode 85250 (CommunityName: SCOTTSDALE) is selected. A red arrow points to the 'Action Menu' icon (two overlapping squares) in the top right corner of the table header. A context menu is open, with 'Show on map' highlighted.

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Zip Code 85250 is highlighted in yellow.

The screenshot shows a map of the Scottsdale area in Maricopa County, Arizona. A specific area is highlighted in yellow, corresponding to Zip Code 85250. A red arrow points to this yellow-highlighted area. The map includes various streets labeled such as McCormick Pkwy, Indian Bend Rd, Hayden Rd, Pima Rd, Canal Bank Rd, McDonald Dr, Dobson Rd, Chaparral Rd, Camelback Rd, and 50th St. Below the map is a search interface with a 'ZIP Code' input field containing '85233'. To the right of the input field are several icons: a magnifying glass, a trash can, a refresh symbol, and a grid icon. Below these icons is a table with two columns: 'ZipCode' and 'CommunityName'. The table contains the following data:

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

To the right of the table is a legend with several items:

- Terrain (NAVD88)
- Parcel (Current)
- Zip Code
- City
- Township Range Section
- Street
- 2022 Sep - 2022 Oct
- 2021 Sep - 2021 Nov
- 2020 Oct - 2020 Nov
- 2019 Sep - 2019 Dec
- 2018 Sep - 2018 Dec
- 2017 Sep - 2017 Nov
- 2016 Sep - 2016 Dec
- 2015 Nov - 2016 Feb
- 2014 Sep - 2014 Nov
- 2013 Sep - 2013 Nov

Later you will learn how to automate some actions.

Whenever you select a record from the Table, the map will zoom to it automatically.

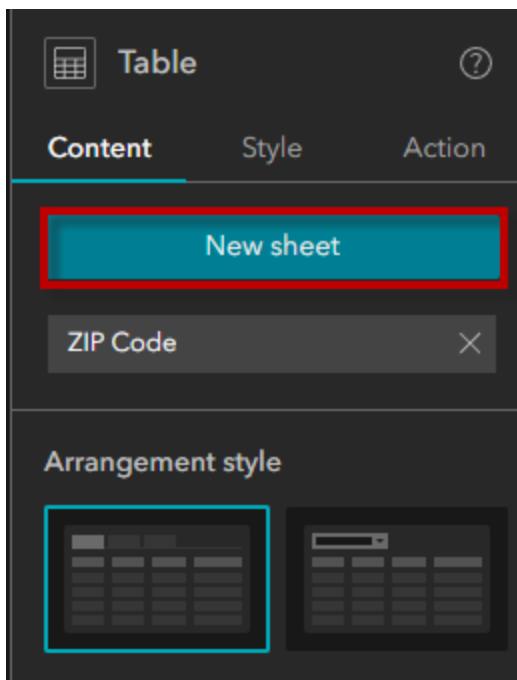
Turn on the Zip Code layer to see the Zip Code boundaries and labels.

The screenshot shows a historical aerial map of Maricopa County, Arizona, with a focus on Scottsdale and surrounding areas. The map displays various streets, landmarks, and agricultural fields. Overlaid on the map are purple outlines representing zip code boundaries. A yellow rectangular area highlights a specific region in the center-right of the map. A red arrow points to a green button labeled "Turn On" located in the top right corner of the map interface. To the right of the map is a vertical sidebar containing a list of layers and their status. The "Zip Code" layer is checked and highlighted in green. Other layers listed include Terrain (NAVD88), Parcel (Current), City, Township Range Section, Street, and numerous time-based layers from 2007 to 2022. Below the map is a search bar with the placeholder "ZIP Code" and a dropdown table showing results for "85253".

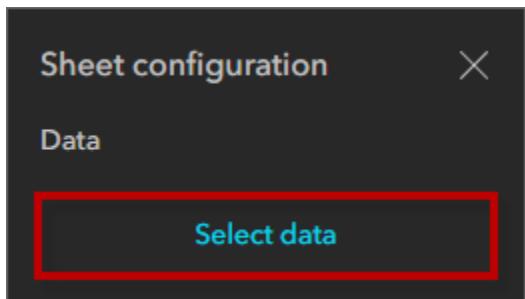
ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Next, you will configure another table for the City Layer.

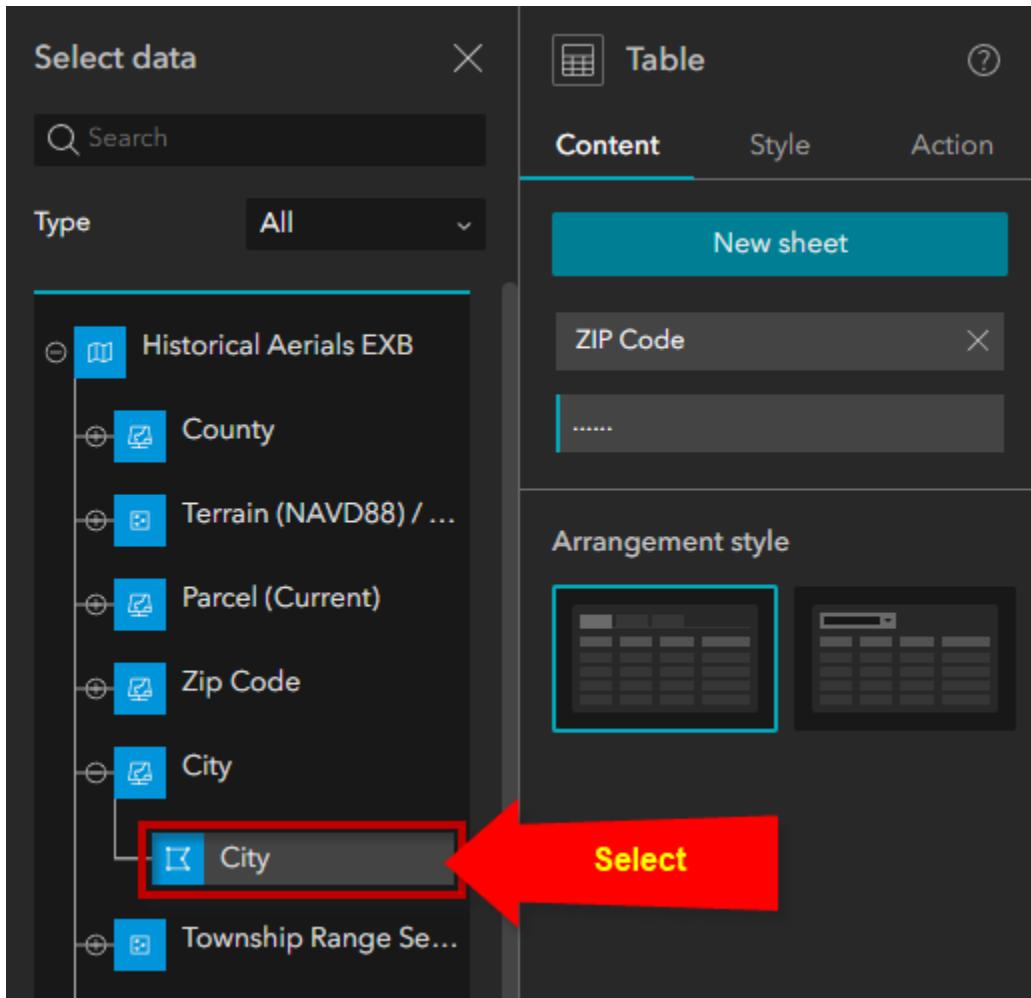
New Sheet



Select Data



Expand City and Select the City Layer nested within.



Sheet configuration X

Data

City

Default

Label

City

Table

Content Style Action

New sheet

ZIP Code X

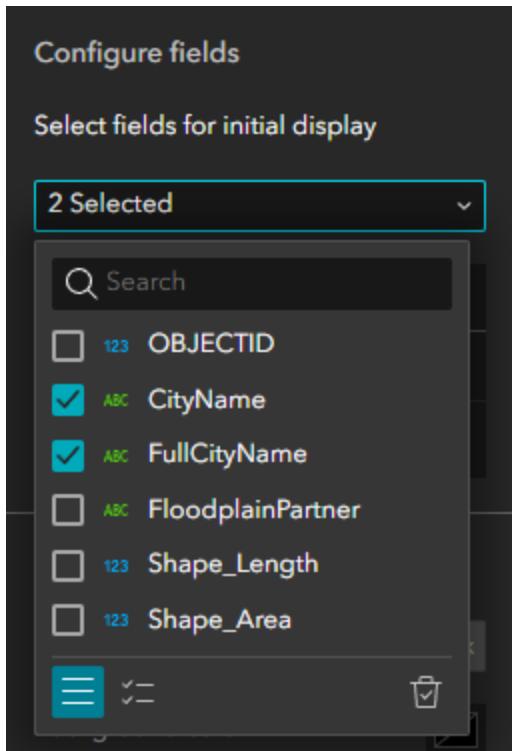
City X

Arrangement style

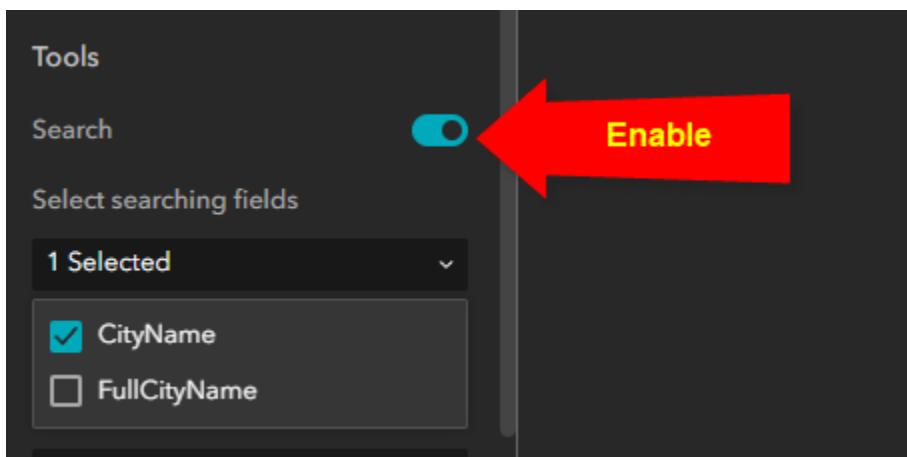
City has been added.

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

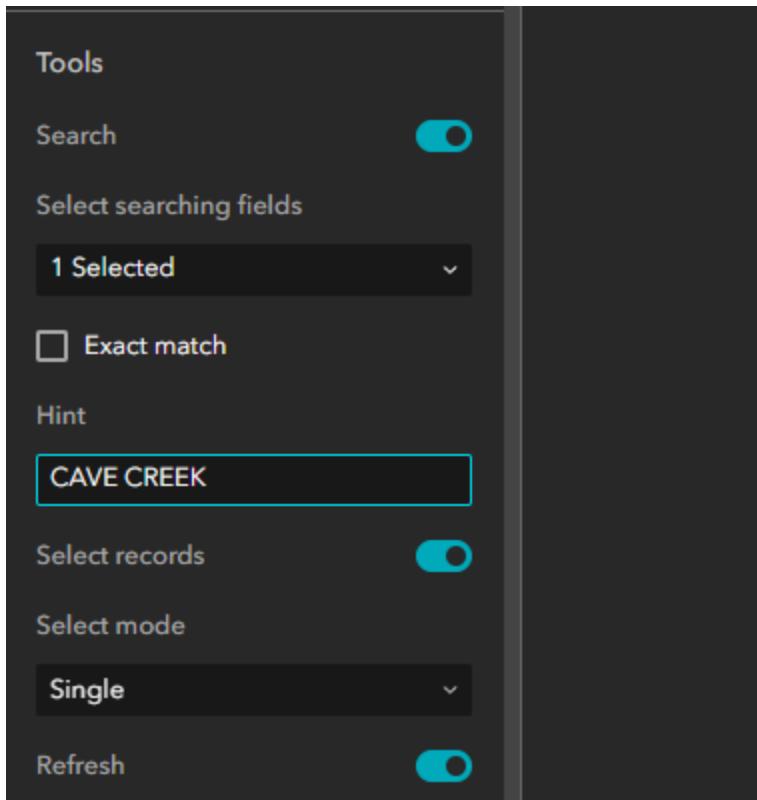
Uncheck all the items except CityName and FullCityName.



Enable Search and select CityName as your Search Item.



Hint = CAVE CREEK



Save

Publish

[View Published Item](#)

<https://localhost:3001/experience/3/>

Open the City Tab.

ZIP Code City

CAVE CREEK

CityName	FullCityName
PEORIA	City of Peoria
PEORIA	City of Peoria
MESA	City of Mesa
MESA	City of Mesa
MESA	City of Mesa

Begin to type CAVE CREEK in the Search Tool.

Select CAVE CREEK

ZIP Code City

CAVE CREEK

CAVE CREEK
CITY OF

One record is found. Click to select it.

Screenshot of a GIS application interface. At the top, there is a map with a scale bar (5 km/5 mi) and a title 'PHX City - Phoenix, Bureau of Land Management... Powered by Esri'. Below the map is a search bar with 'ZIP Code' and 'City' tabs, currently set to 'City'. The search input field contains 'CAVE CREEK'. To the right of the search bar are several icons: a magnifying glass, a trash can, a refresh, and two other symbols. Below the search bar is a table with two columns: 'CityName' and 'FullCityName'. The first row shows 'CAVE CREEK' in the 'CityName' column and 'Town of Cave Creek' in the 'FullCityName' column. A red arrow points from the text 'Select' to the icon in the 'CityName' column of the first row.

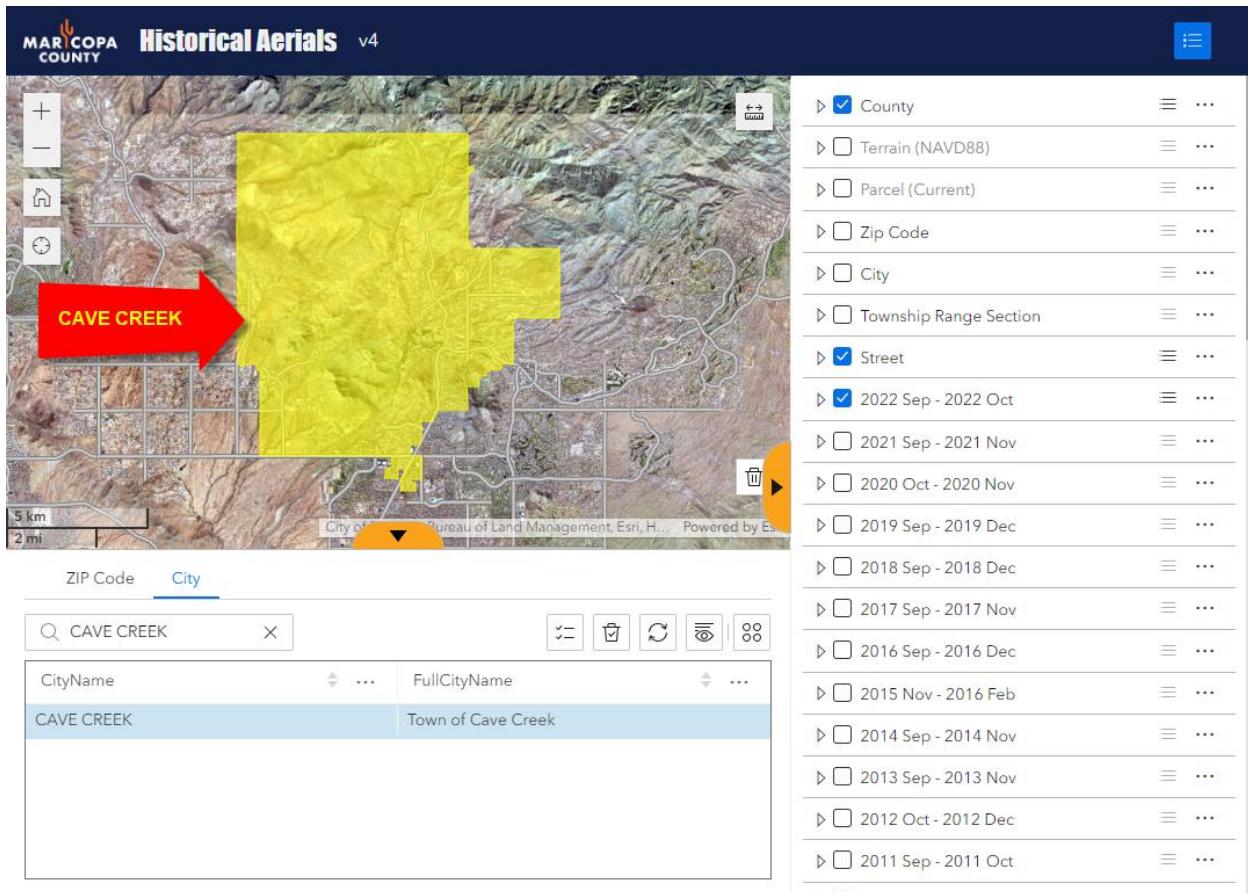
Action Menu | Zoom to

Screenshot of an action menu for the selected item 'Town of Cave Creek'. The menu includes options: 'Zoom to' (highlighted in blue), 'Pan to', 'Show on map', 'Export all', and 'Export selected'.

Action Menu | Show on Map

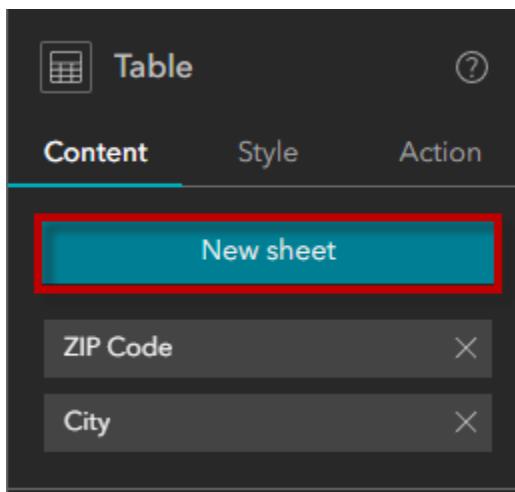
Screenshot of an action menu for the selected item 'Town of Cave Creek'. The menu includes options: 'Zoom to', 'Pan to', 'Show on map' (highlighted in blue), 'Export all', and 'Export selected'.

The City of CAVE CREEK is highlighted in yellow.



Next, you will add the Subdivision Layer to the Table.

Add a New Sheet.



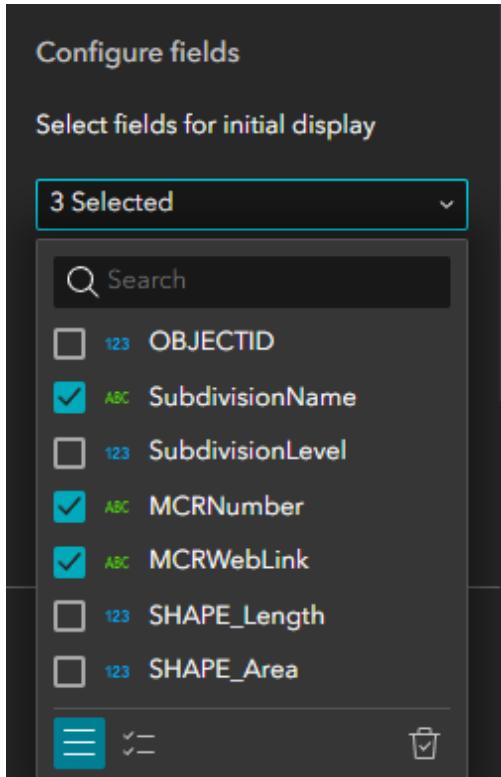
Select Data

This screenshot illustrates a two-panel interface. On the left, a dark modal window titled 'Sheet configuration' is open, containing a single button labeled 'Select data' which is also highlighted with a red box. On the right, the same dark-themed 'Table' configuration interface is shown, but it is not the active window. Its 'Content' tab is selected, and its 'New sheet' button is highlighted with a red border, matching the one in the configuration dialog. This visual cue indicates that the 'Select data' action will trigger the creation of a new sheet.

Expand Parcel and select Subdivision

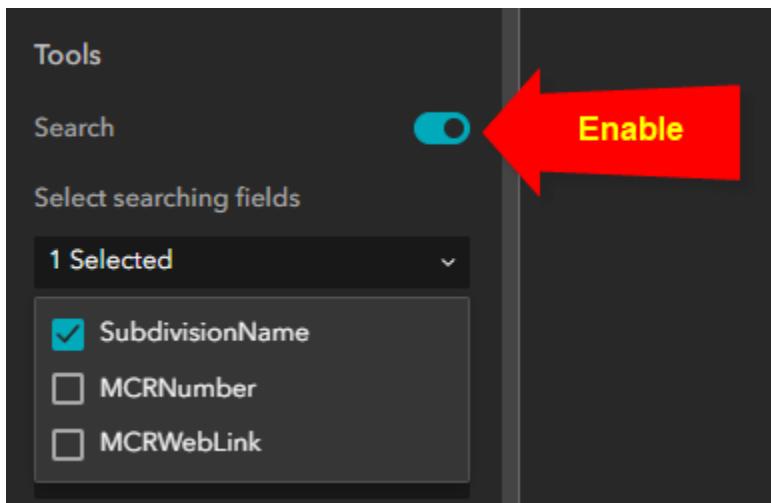
The screenshot shows the 'Select data' interface with the 'Content' tab selected. On the left, a tree view lists various data types: 'Historical Aerials EXB', 'County', 'Terrain (NAVD88) / ...', 'Parcel (Current)', 'Subdivision' (which is checked and highlighted with a red box), and 'Parcel'. On the right, under 'Content', there are fields for 'ZIP Code' and 'City', both of which have an 'X' icon to their right. Below these fields is a section titled 'Arrangement style' containing two preview icons.

Select the following 3 items.

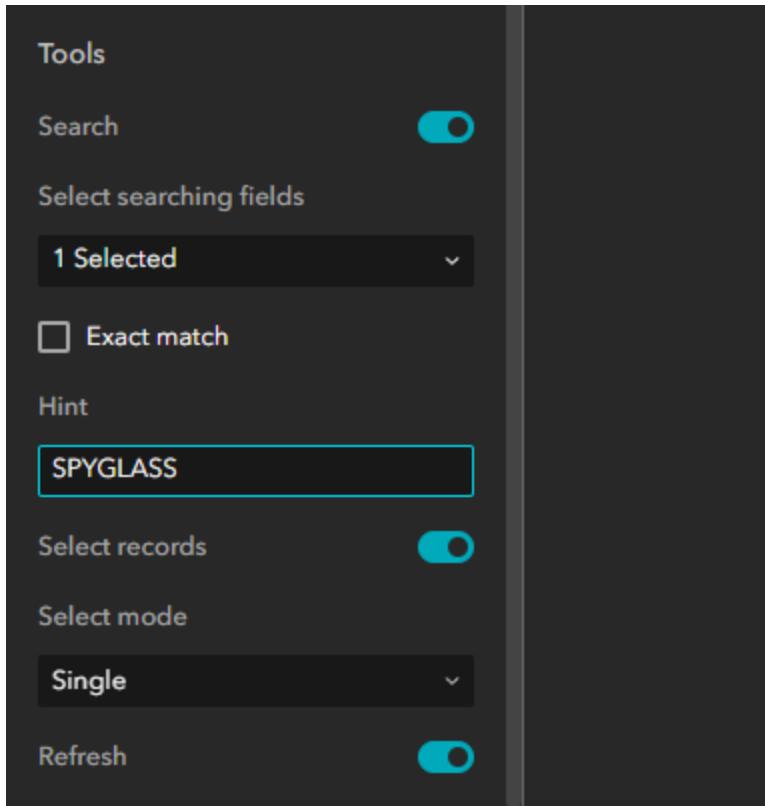


Enable Search.

Search Field = SubdivisionName



Hint = SPYGLASS



Save, Publish and View Published Item.

<https://localhost:3001/experience/3/>

Open the Subdivision Tab

The screenshot shows the Maricopa County Historical Aerials v4 application. At the top, there's a map of Phoenix with a green polygon highlighting a specific subdivision. Below the map is a search bar with three tabs: ZIP Code, City, and Subdivision, with 'Subdivision' currently selected. A dropdown menu lists several subdivisions: ANASAZI, CAREFREE CASAS, CASA DOMANI AMD, CASITA ROYALE TOWNHOMES, and CENTRAL PARKWAY CONDOMINIUM. To the right of the map is a sidebar with a list of checkboxes for various geographical features, such as County, Street, and different time periods from 2010 to 2022.

Enter SPYGLASS in the Search Box and select SPYGLASS from the drop-down.

This screenshot shows the subdivision search interface. In the search bar, 'SPYGLASS' is entered. A dropdown menu appears with four options: 'SPYGLASS 2', 'SPYGLASS BAY', 'SPYGLASS', and 'SPYGLASS ESTATES'. The 'SPYGLASS' option is highlighted with a blue background and has a red arrow pointing to a yellow 'Select' button next to it. Below the dropdown, a table lists subdivisions with their MCRNumbers: CASA DOMANI AMD (000-04), CASITA ROYALE TOWNHOMES (000-05), and CENTRAL PARKWAY CONDOMINIUM (000-06).

Select the SPYGLASS Subdivision Record.

The screenshot shows a GIS application interface. At the top, there is a map of Pinel County, Arizona, with a scale bar indicating 5 km and 5 mi. Below the map is a search bar with the text 'SPYGLASS'. Underneath the search bar is a table with the following data:

SubdivisionName	MCRNumber	MCRWebLink
SPYGLASS 2	212-35	View
SPYGLASS BAY	383-22	View
SPYGLASS	198-10	View
SPYGLASS ESTATES	289-17	View

Action Menu | Zoom To

The screenshot shows the Action Menu open, with the 'Zoom to' option highlighted in blue. The menu also includes other options: 'Pan to', 'Show on map', 'Export all', and 'Export selected'.

Action Menu | Show on Map

The screenshot shows the Action Menu open, with the 'Show on map' option highlighted in blue. The menu also includes other options: 'Zoom to', 'Pan to', 'Export all', and 'Export selected'.

The SPYGLASS Subdivision is highlighted in yellow.



Open the Link to the Maricopa County Recorder Page.

ZIP Code	City	Subdivision	
		<input type="text" value="SPYGLASS"/> X	
		SubdivisionName	MCRNumber
		SPYGLASS 2	212-35
		SPYGLASS BAY	383-22
		SPYGLASS	198-10
		SPYGLASS ESTATES	289-17

Open Link

<https://recorder.maricopa.gov/recdocdata/internetmaps/imapsdetail.aspx?Book=198&Page=10&imgType=PDF&mapttype=Plat>

FAQs Contact

STEPHEN RICHER
MARICOPA COUNTY RECORDER

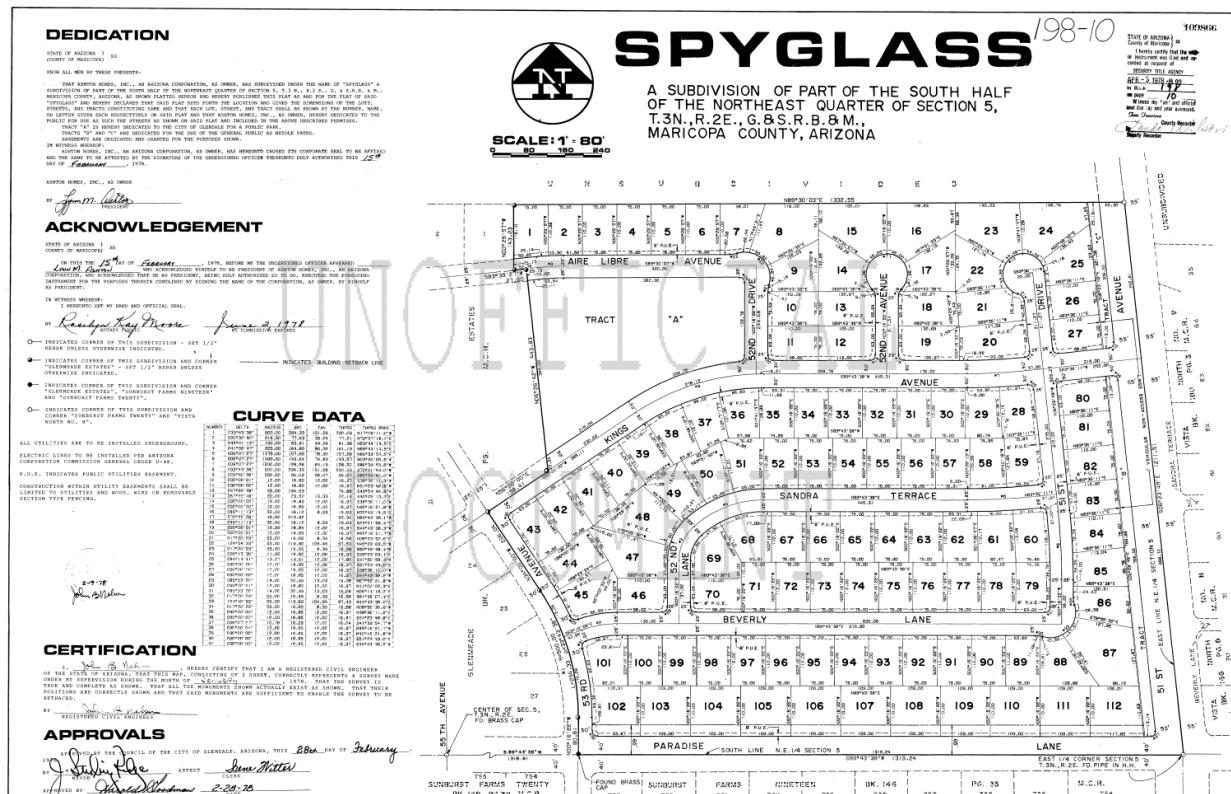
Home About Us Recorder Elections Media Publications Help & Support

Search Results

PLAT MAPS ADD TO CART

198PLAT101 Open BUY

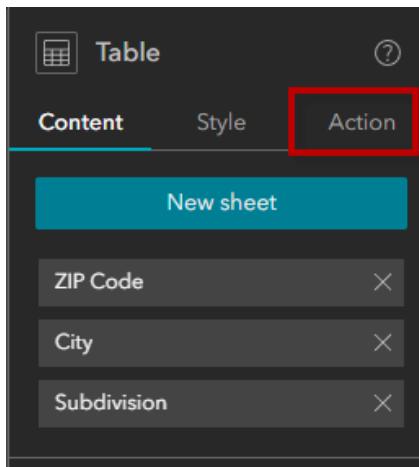
New Search



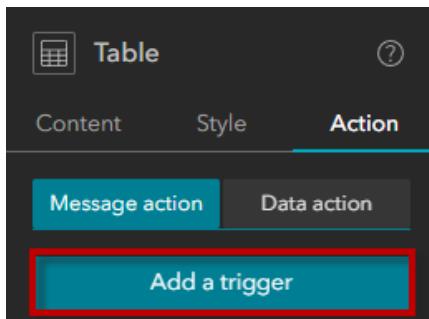
Next, you are going to add some Actions to the Table widget.

Add Actions to the Table Widget

Open the Action Tab.



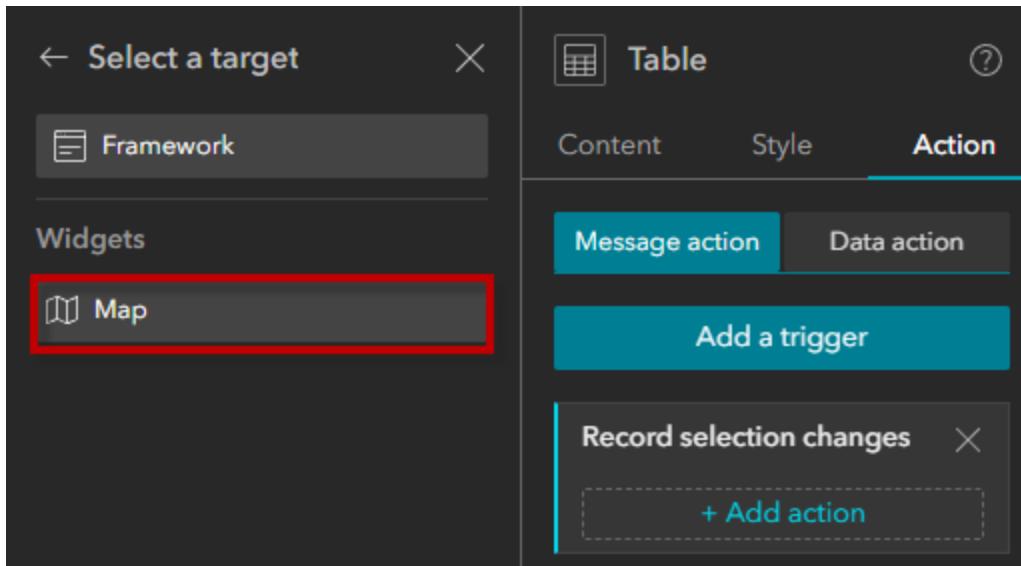
Message Action | Add a Trigger



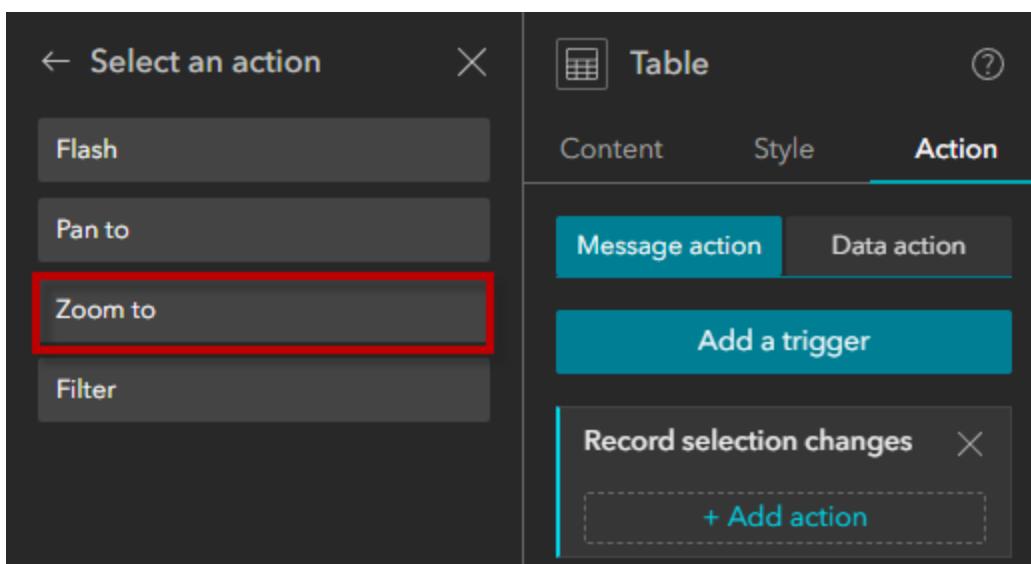
Record Selection Changes

A screenshot showing two windows side-by-side. On the left is a modal dialog titled "Select a trigger" with a red box around the text "Record selection changes". On the right is the main configuration interface for a "Table" widget. The "Action" tab is selected, indicated by a teal underline. Below it, the "Message action" sub-tab is selected (teal background). A large blue "Add a trigger" button is visible at the bottom.

Map



Zoom To



These are your Action Settings for the 3 data layers.

Action settings

Trigger data

- City X
1 Selected
- Subdivision X
1 Selected
- ZIP Code X
1 Selected

Select data

Zoom scale

- Automatic
- Custom

Table

Content Style Action

Message action Data action

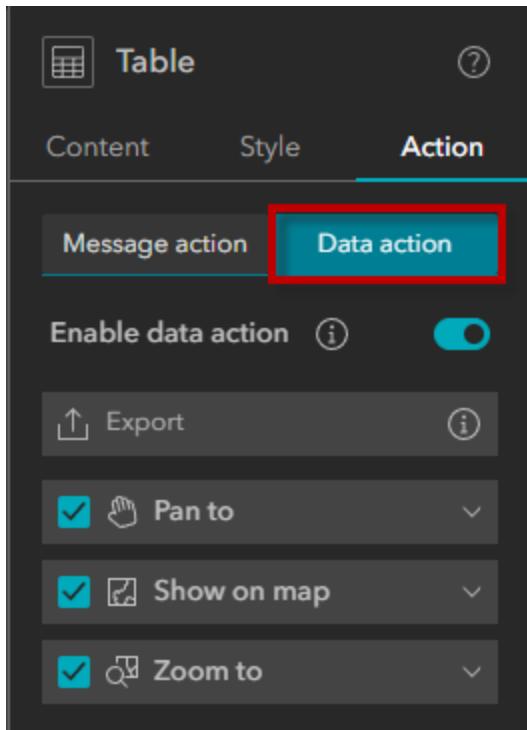
Add a trigger

Record selection changes

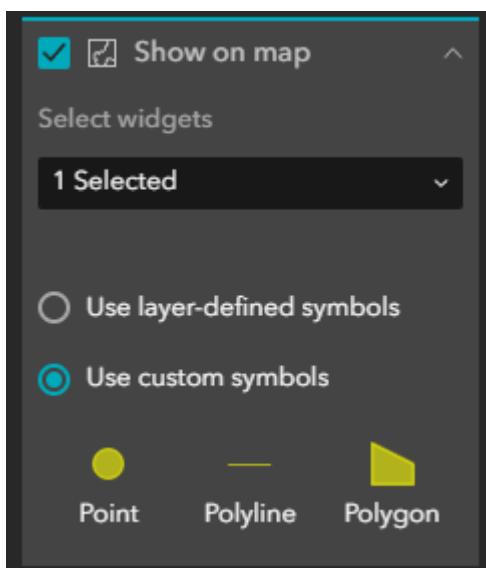
- Map
- Zoom to

+ Add action

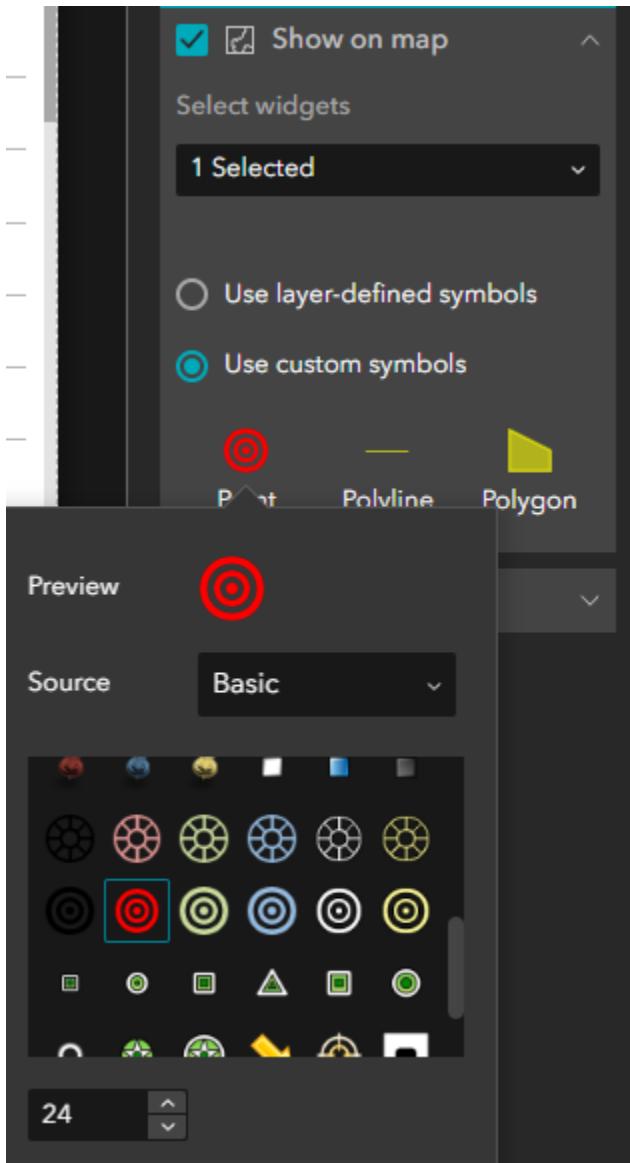
Action | Data Action



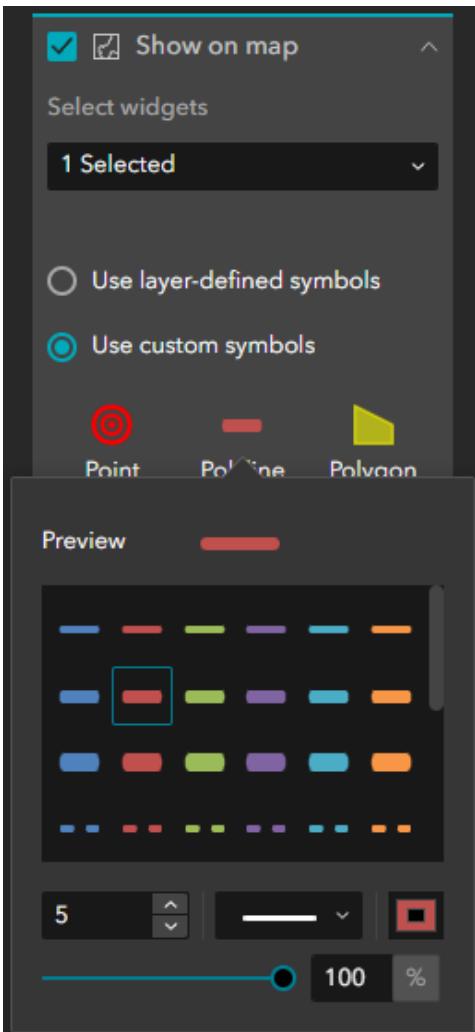
Expand Show on Map



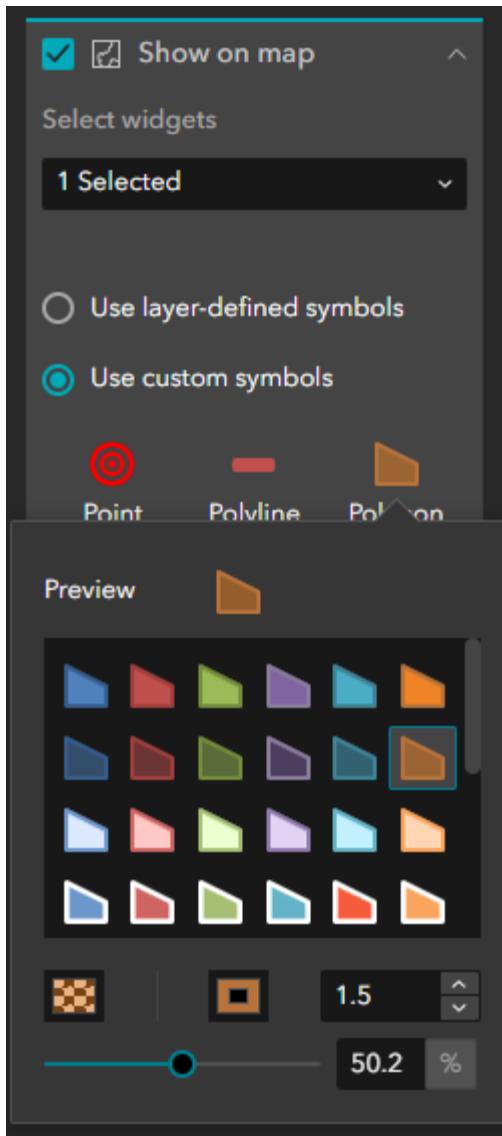
Change the Point Symbol.



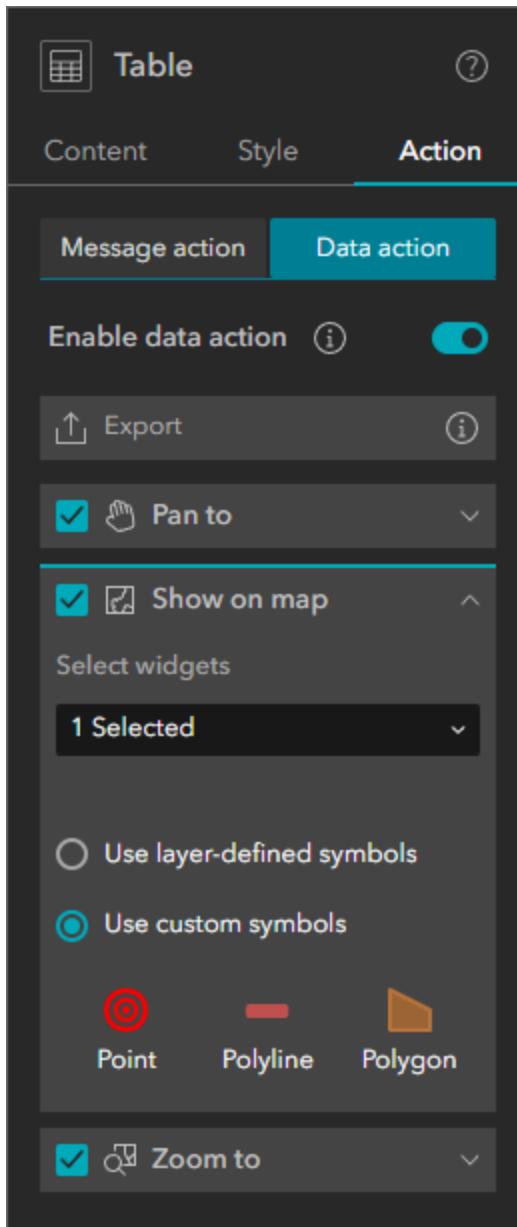
Change the Polyline Symbol.



Change the Polygon Symbol



These are your new symbols.



Save, Publish and View Published Item

<https://localhost:3001/experience/3/>

Turn on the Zip Code Layer.

Select Zip Code = 85250 from the Table.

The map will automatically zoom to Zip Code 85250.

The selected Zip Code boundary will be highlighted in Cyan.

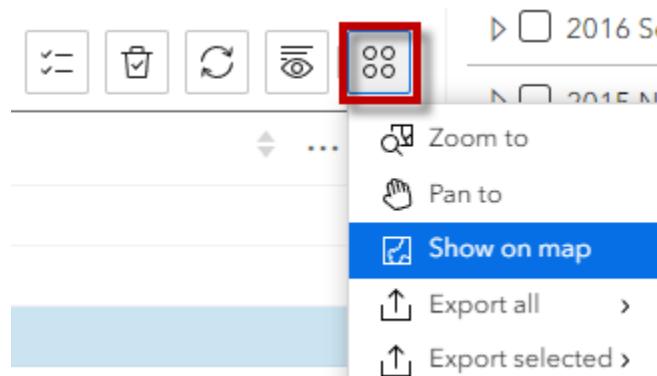
Zip Code Boundary Highlighted in Cyan

Turn On

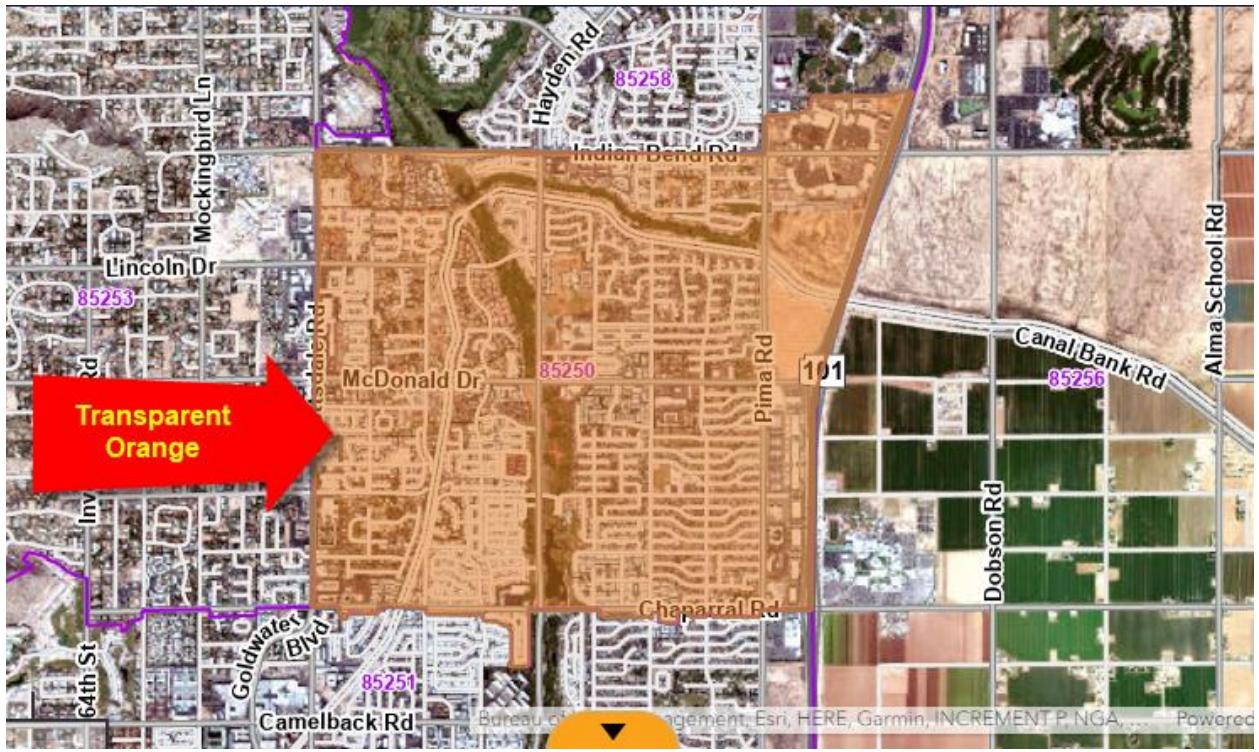
Select

ZipCode	CommunityName
85309	LUKE AIR FORCE BASE
85355	WADDELL
85250	SCOTTSDALE
85322	ARLINGTON
85351	SUN CITY

Action Menu | Show on Map



Zip Code 85250 is highlighted in transparent orange, the Polygon Symbol that you selected.

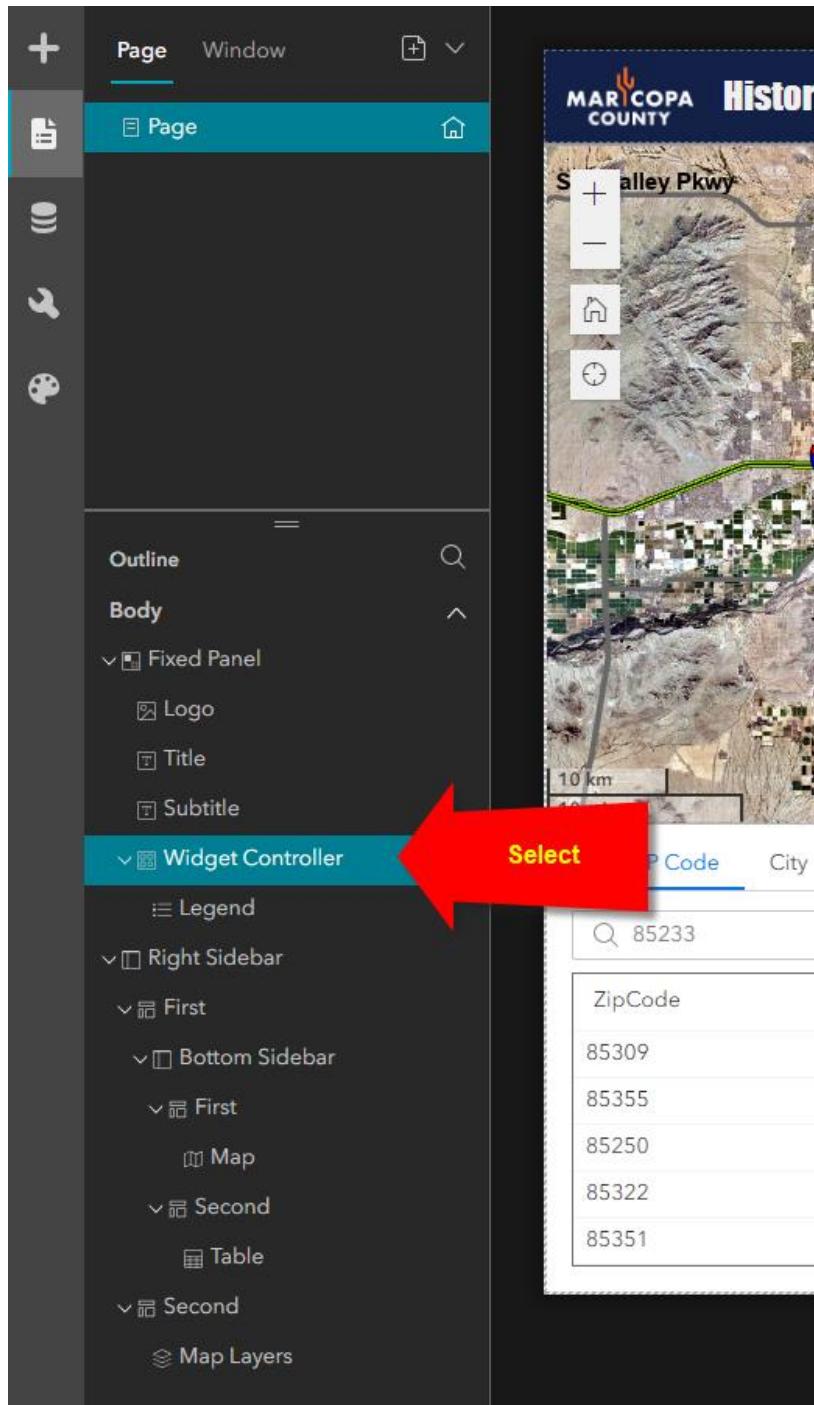


This completes the configuration of the Table widget.

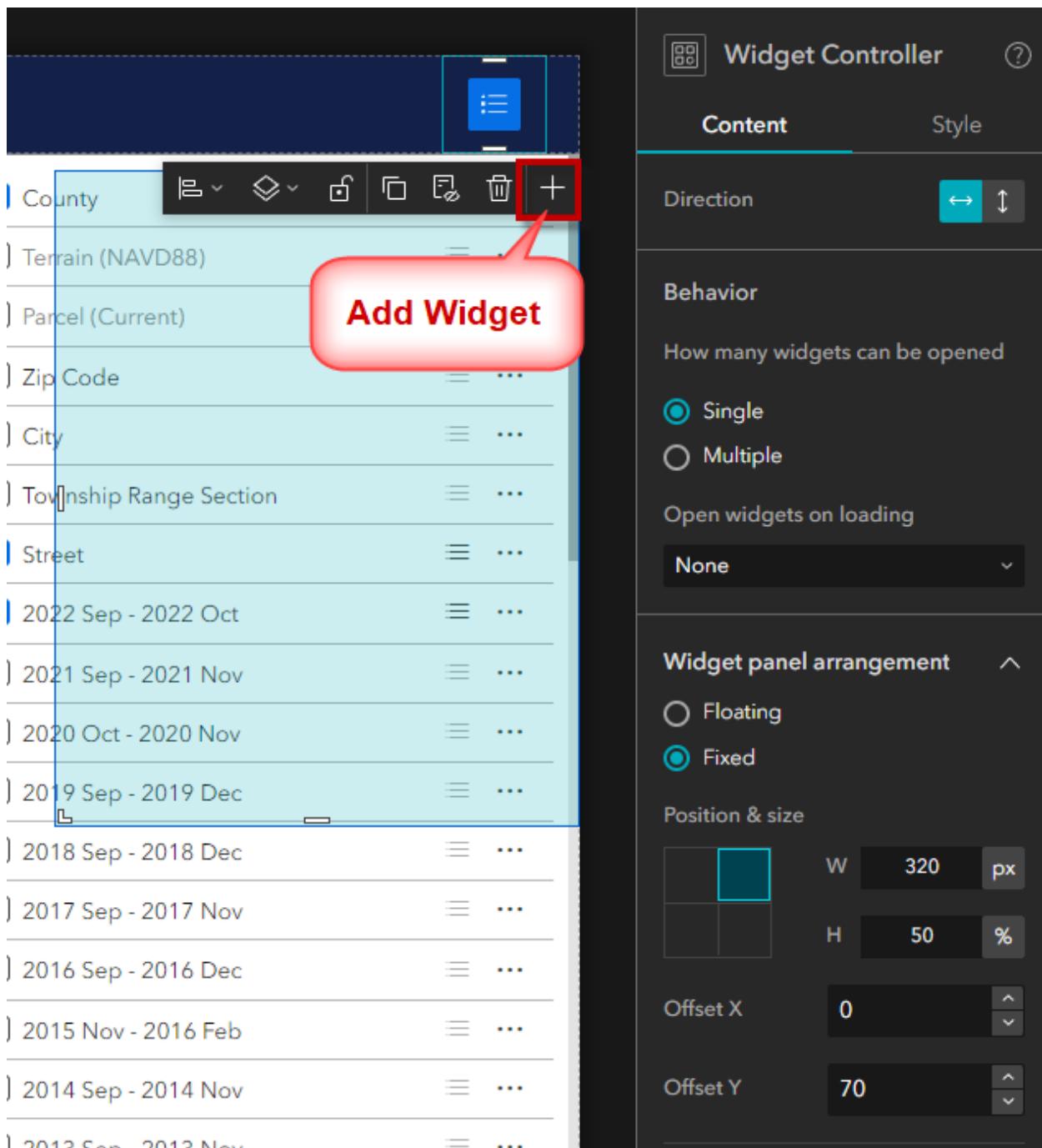
Next, you will configure the Query widget.

Add the Query Widget

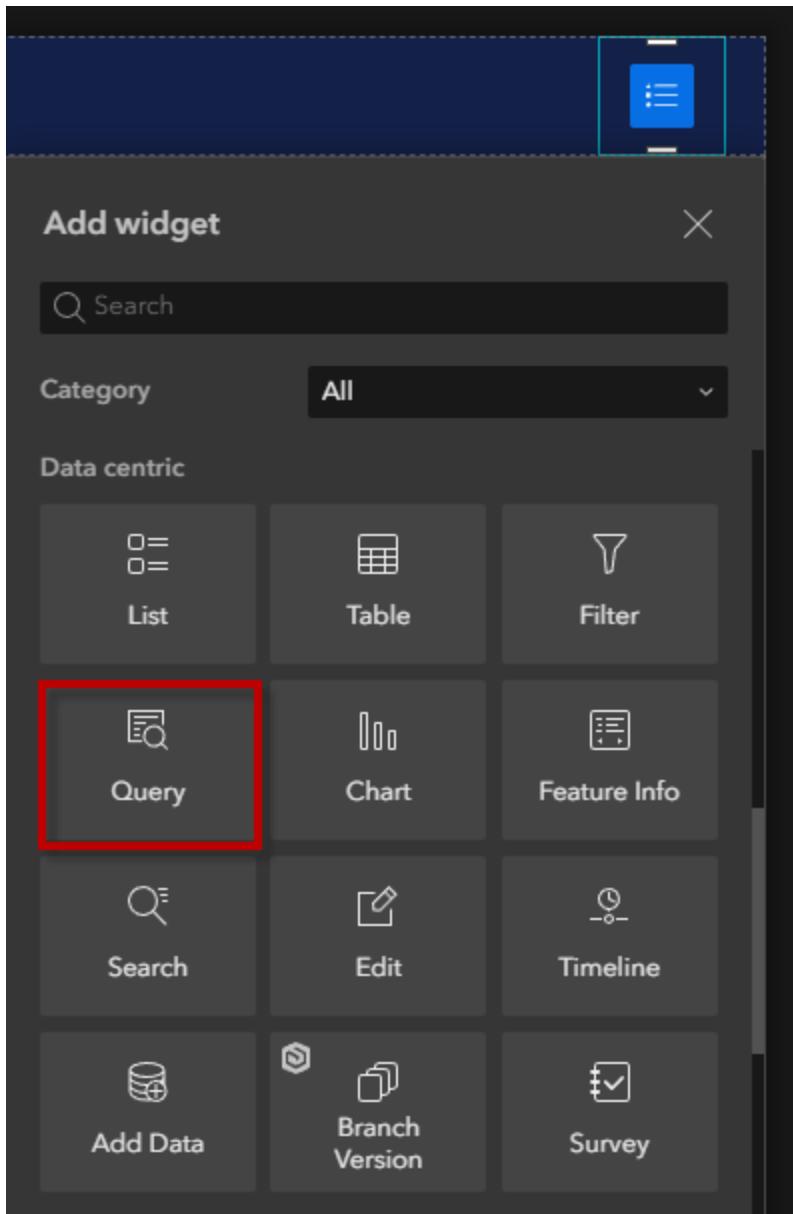
Select the Widget Controller from the Page Outline.



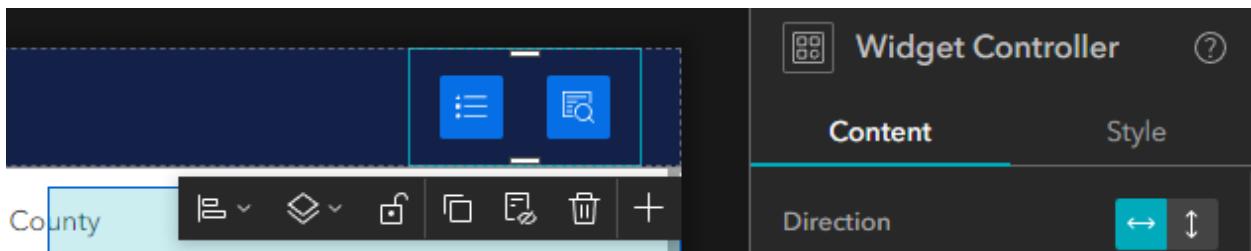
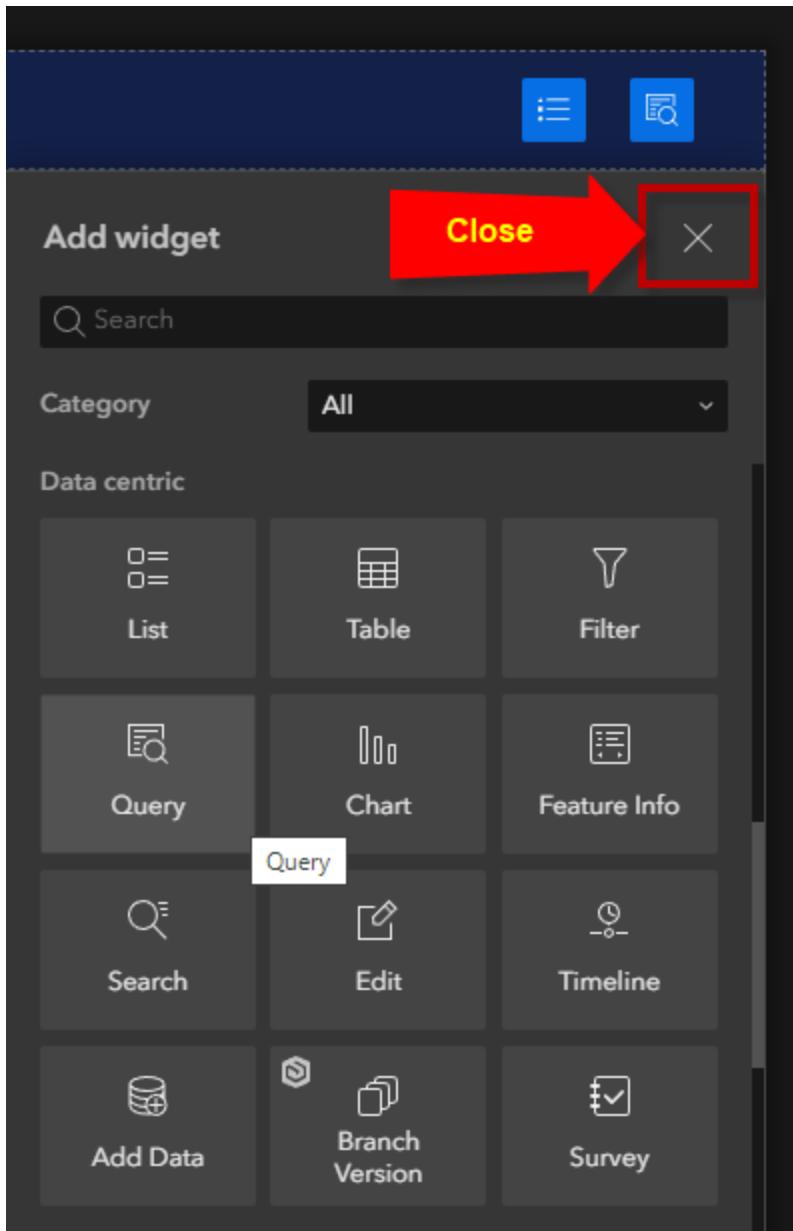
Click on the Add Widget Button



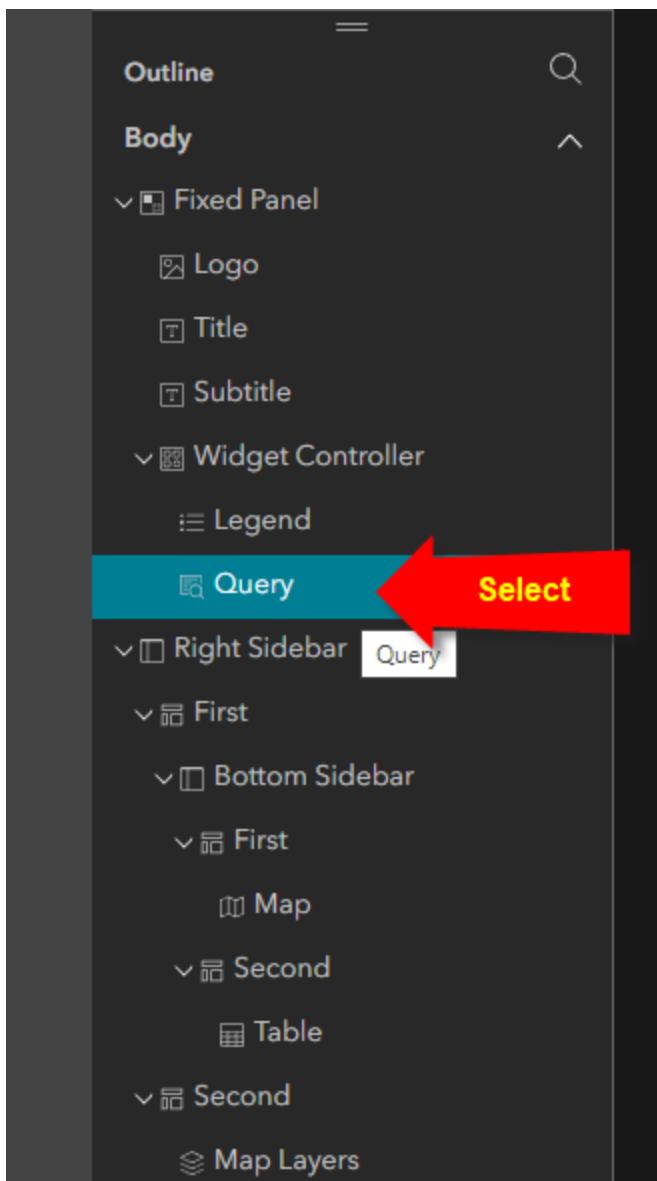
Add the Query Widget



Close the Add Widget Panel.

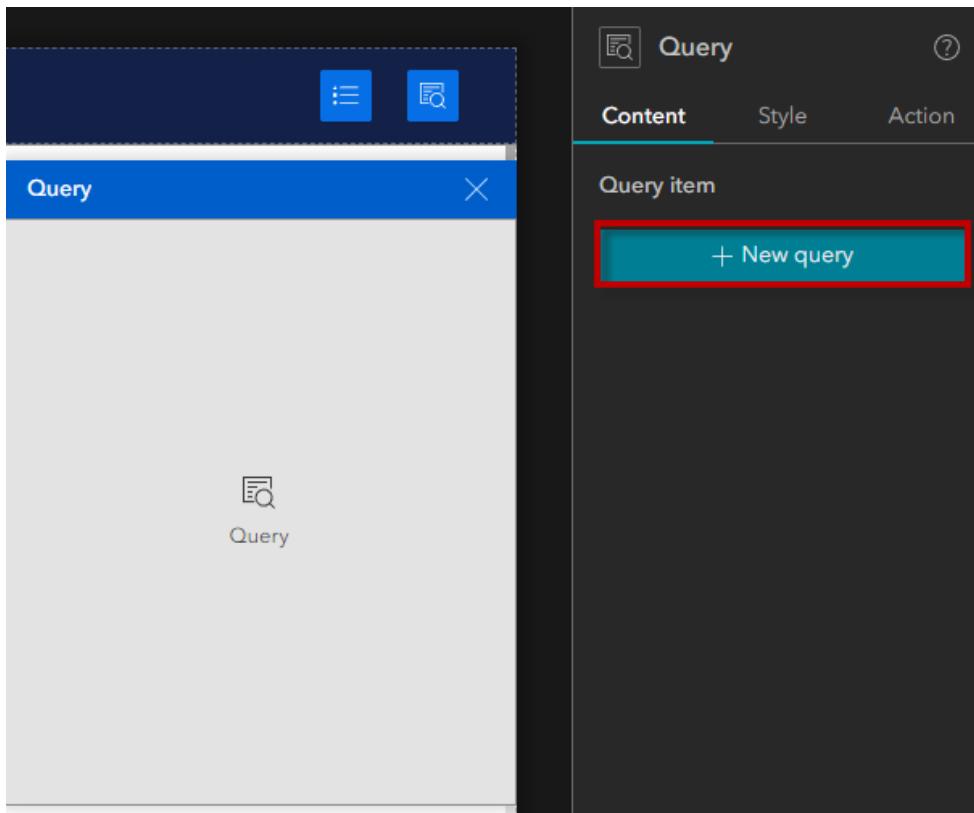


Select the **Query** widget from the Page Outline.

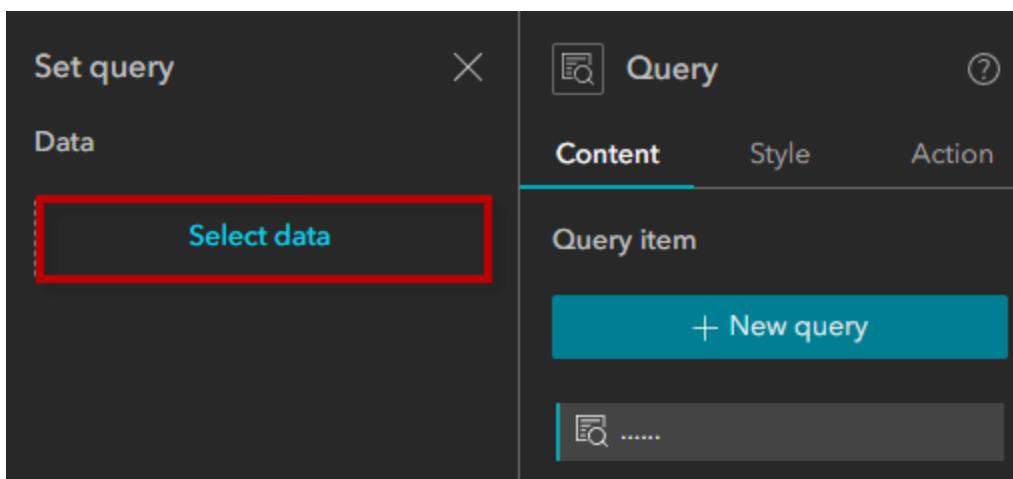


Add the Parcel Query

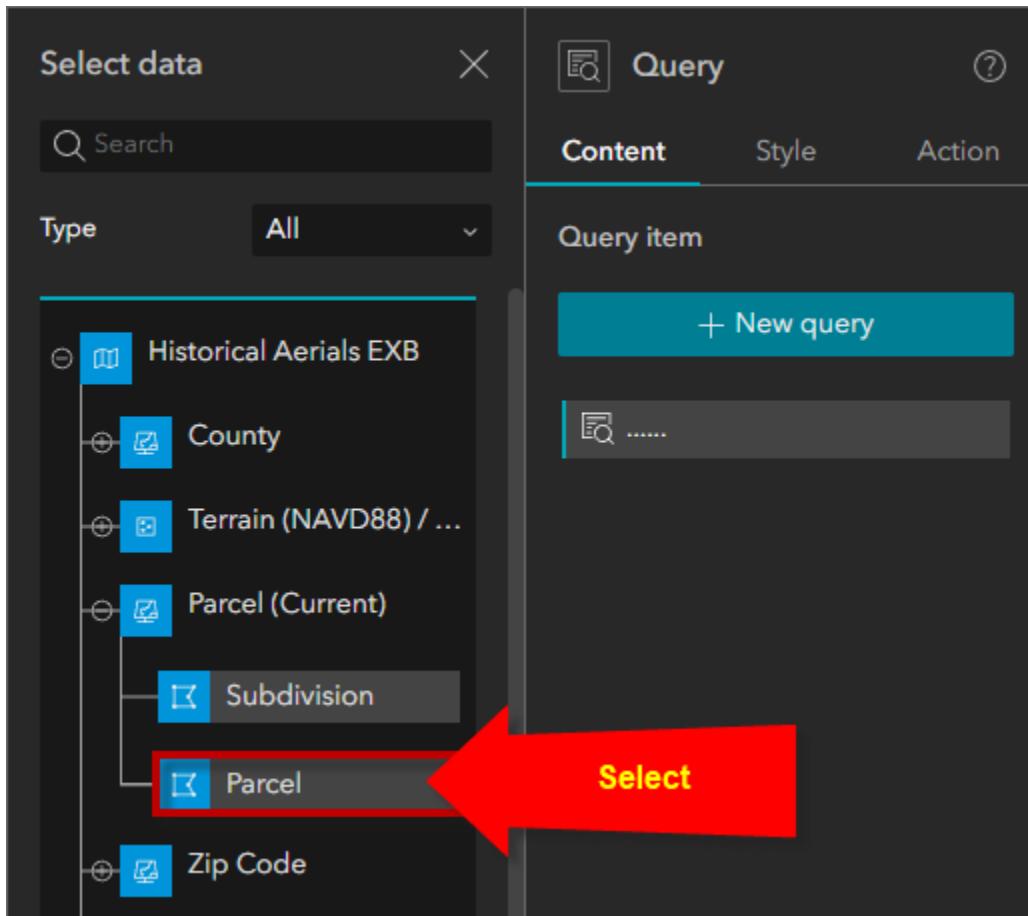
Add New Query



Select Data



Expand Parcel (Current) and select the nested Parcel Layer.



SQL Expression Builder

The screenshot shows two side-by-side panels of a software application.

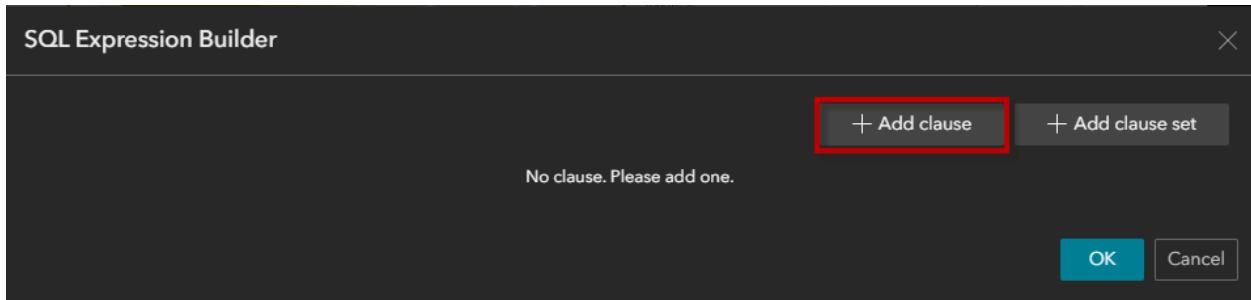
Left Panel (Set query):

- Data:** A dropdown menu showing "Parcel" and "Default".
- Label:** A text input field containing "Parcel".
- Display label:** A toggle switch that is turned on.
- Icon:** A button labeled "Select icon".
- Attribute filter:** A toggle switch that is turned on.
- Label:** A text input field containing "Attribute filter".
- Add SQL expressions to your query:** A red-bordered button labeled "SQL Expression Builder".
- Please add your SQL expressions first.**: A message box below the button.

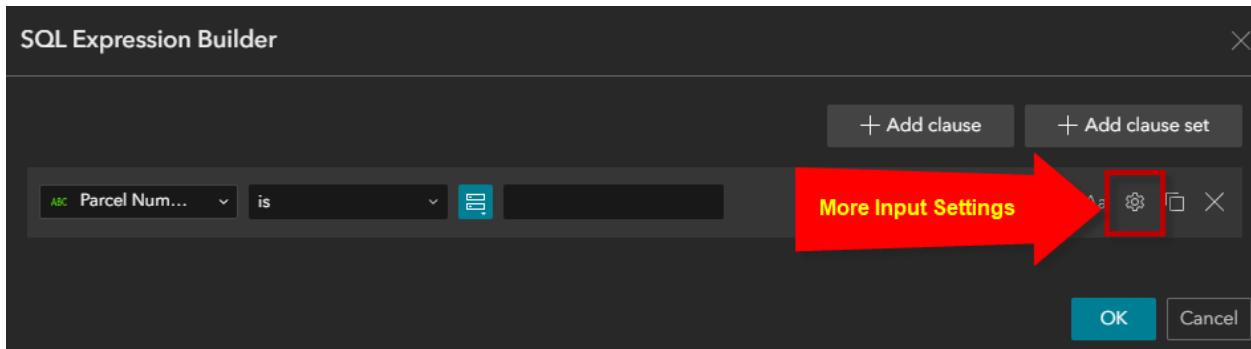
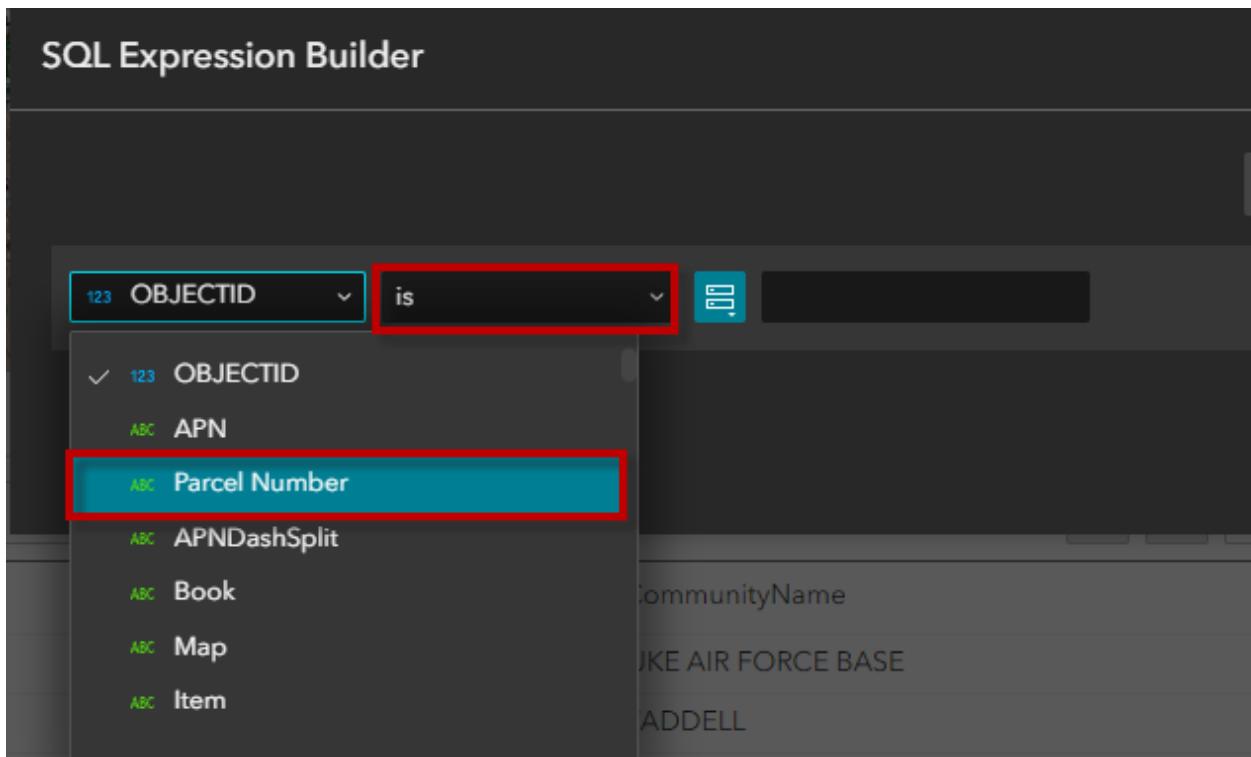
Right Panel (Query):

- Content:** The active tab, showing a "Query item" section with a "New query" button.
- Style:** A tab.
- Action:** A tab.
- Query item:** A list item labeled "Parcel".
- Arrangement style:** A section showing three grid layout options, with the first one highlighted by a cyan border.
- Result style:** A section.
- List direction:** A dropdown menu with a double-headed arrow icon.
- Paging Style:** A dropdown menu set to "Multipage".
- Number of records per page:** A dropdown menu set to "100".

Add Clause



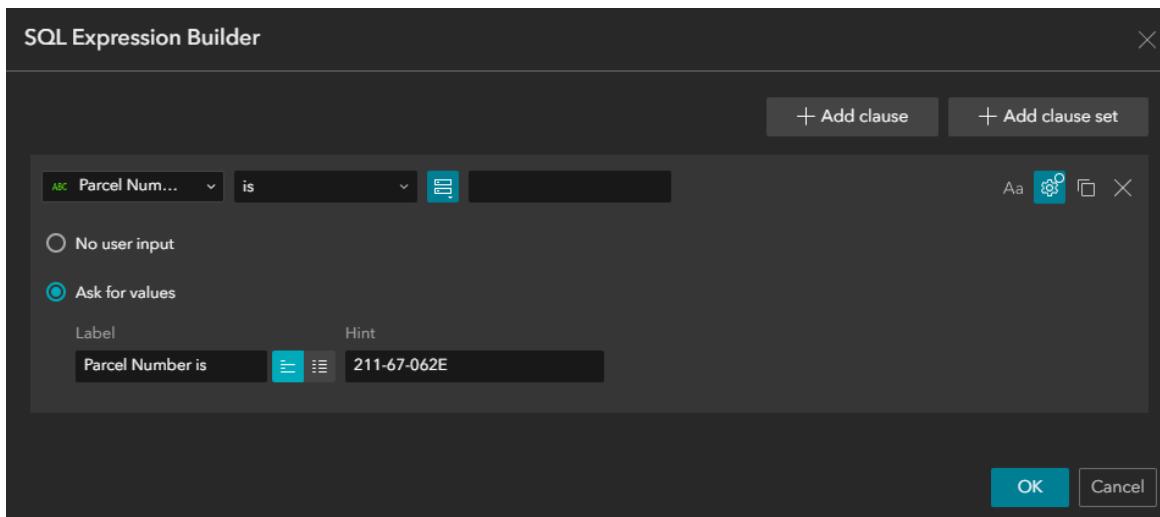
Parcel Number is



More Input Settings

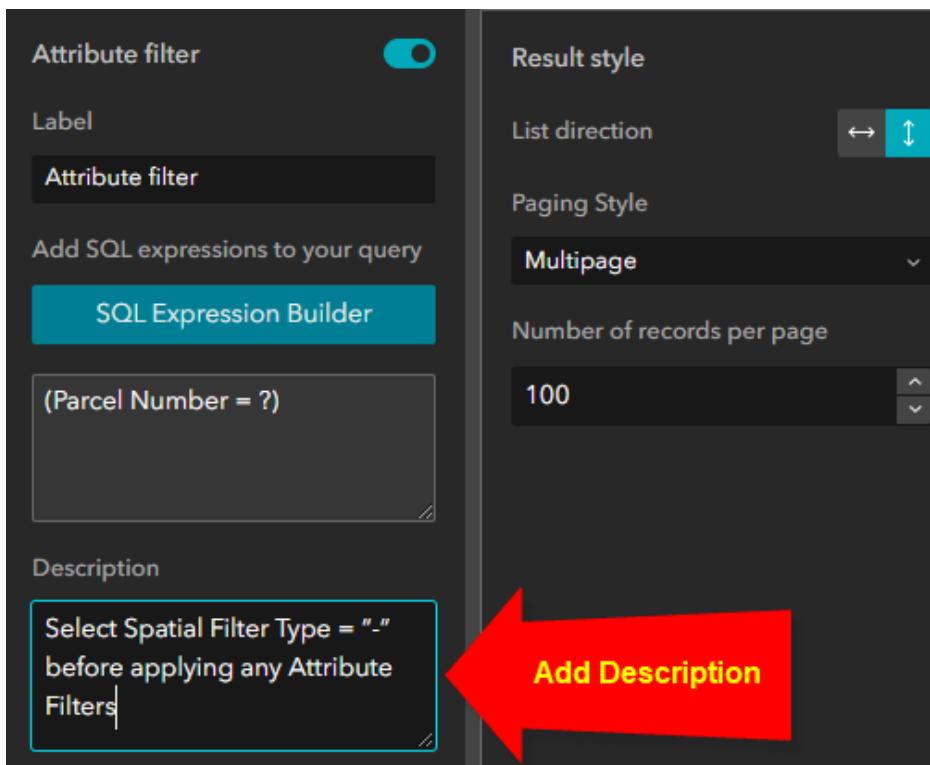
Ask for Values

Parcel Number is **211-67-062E**



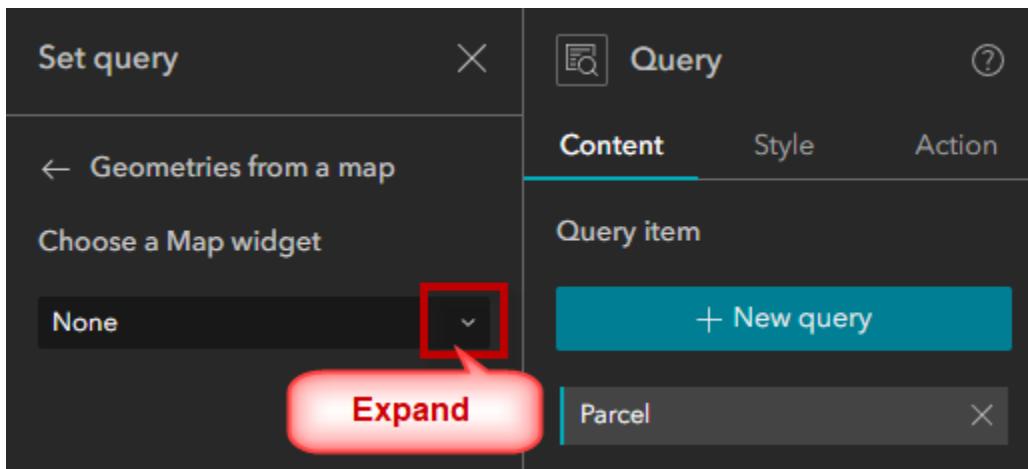
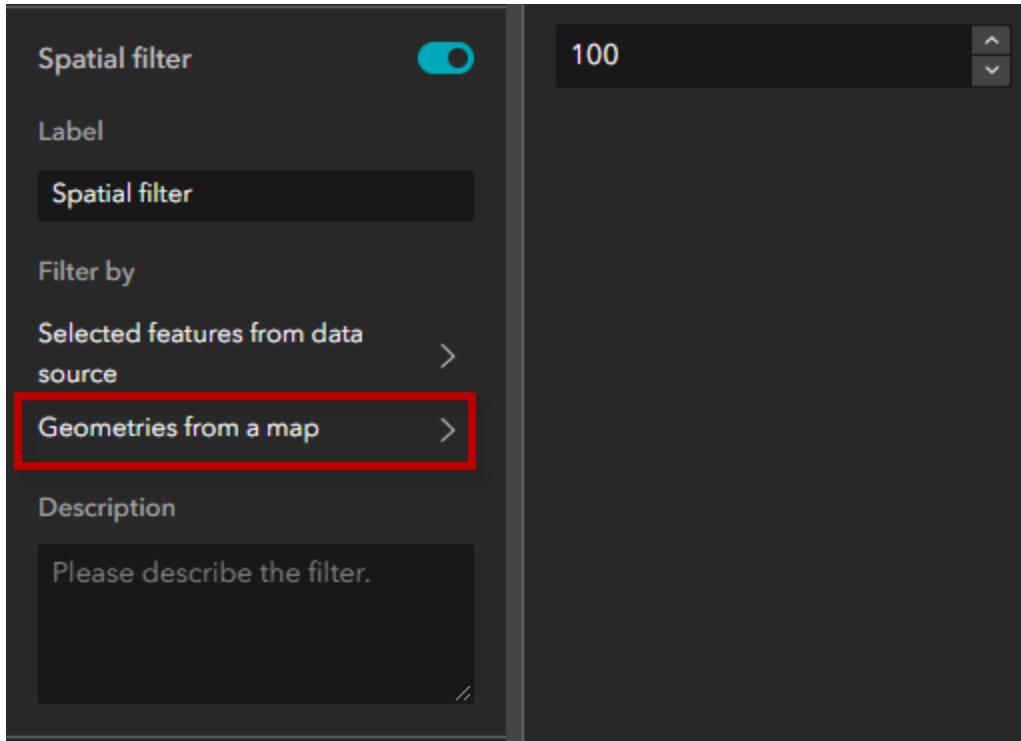
Description:

Select Spatial Filter Type = “-” before applying any Attribute Filters

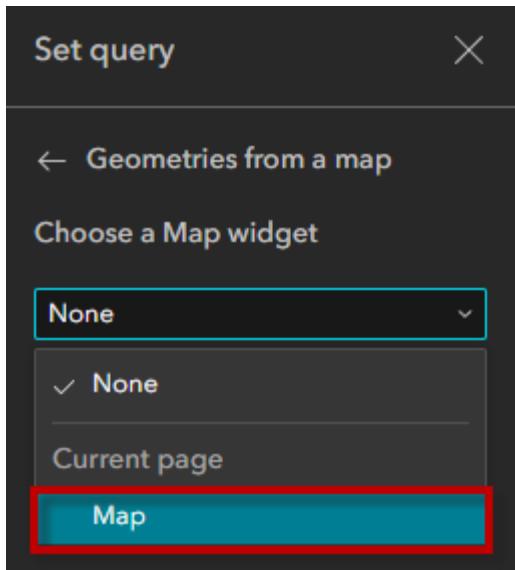


Enable Spatial Filter.

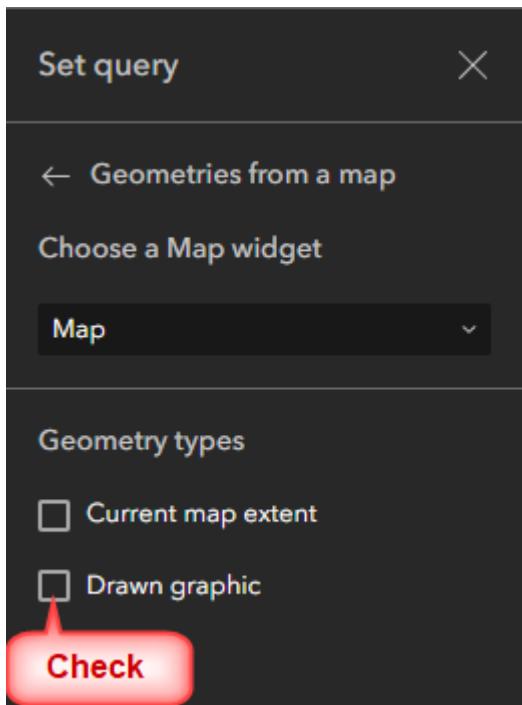
Select Geometries from a Map



Choose a Map widget = Map



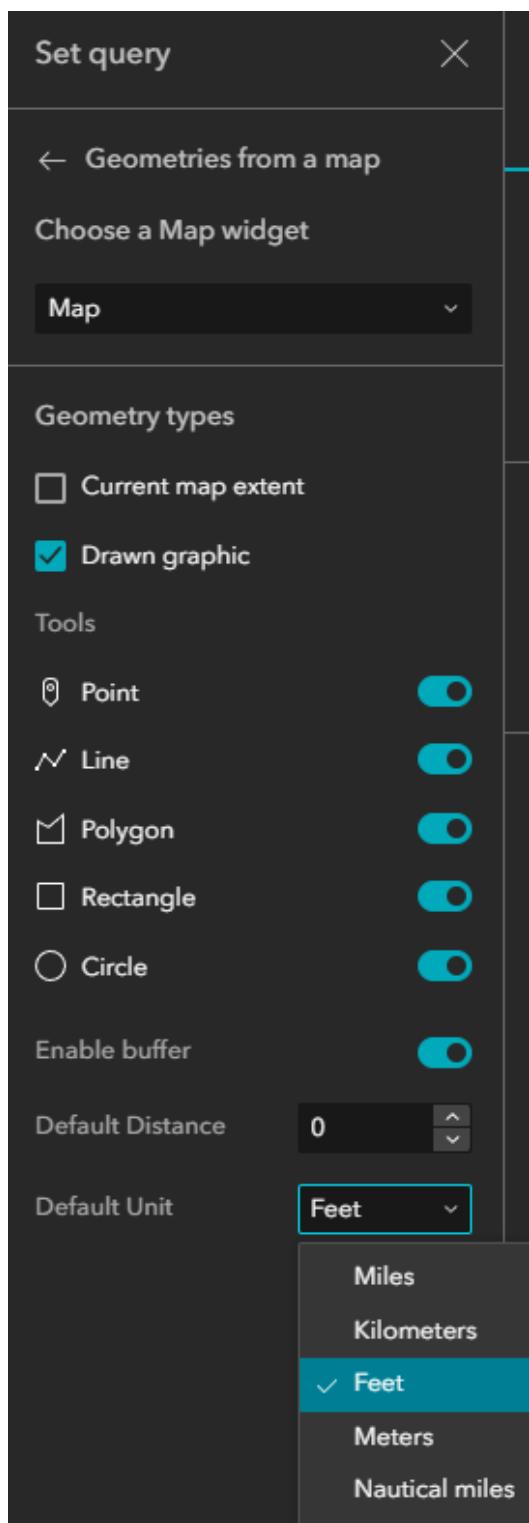
Check Drawn graphic



Enable Buffer

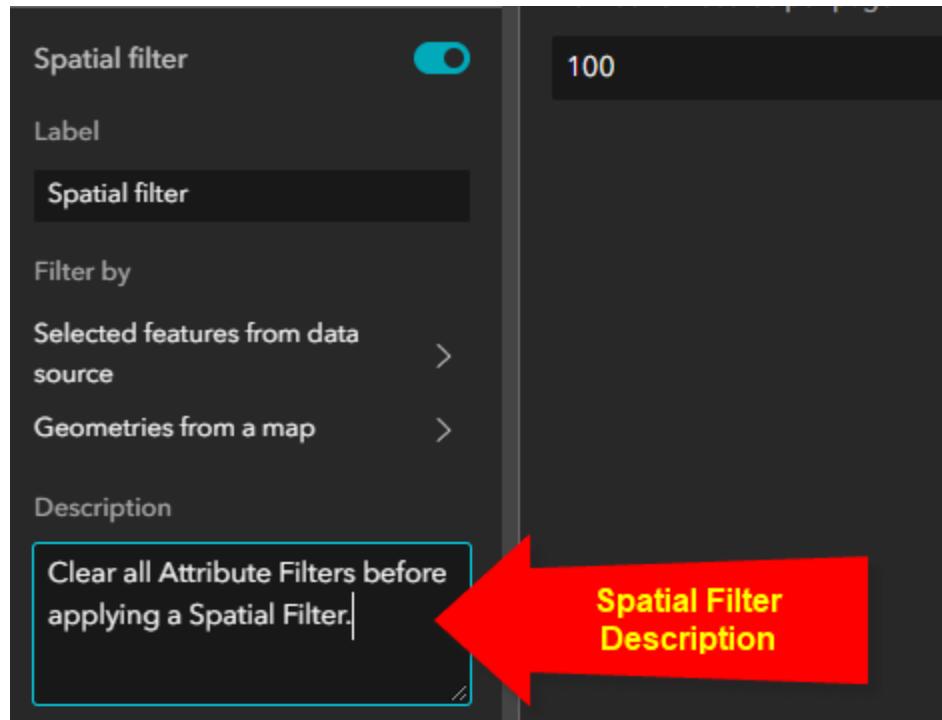
Default Distance = 0

Default Unit = Feet

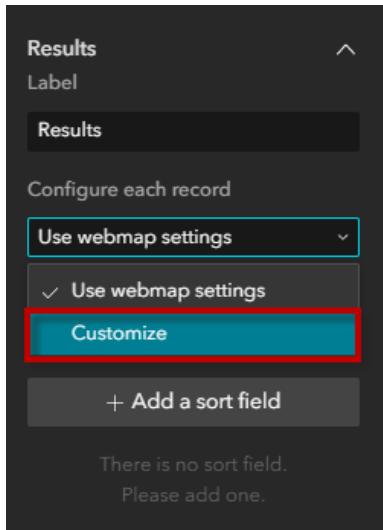


Spatial Filter Description:

Clear all Attribute Filters before applying a Spatial Filter.



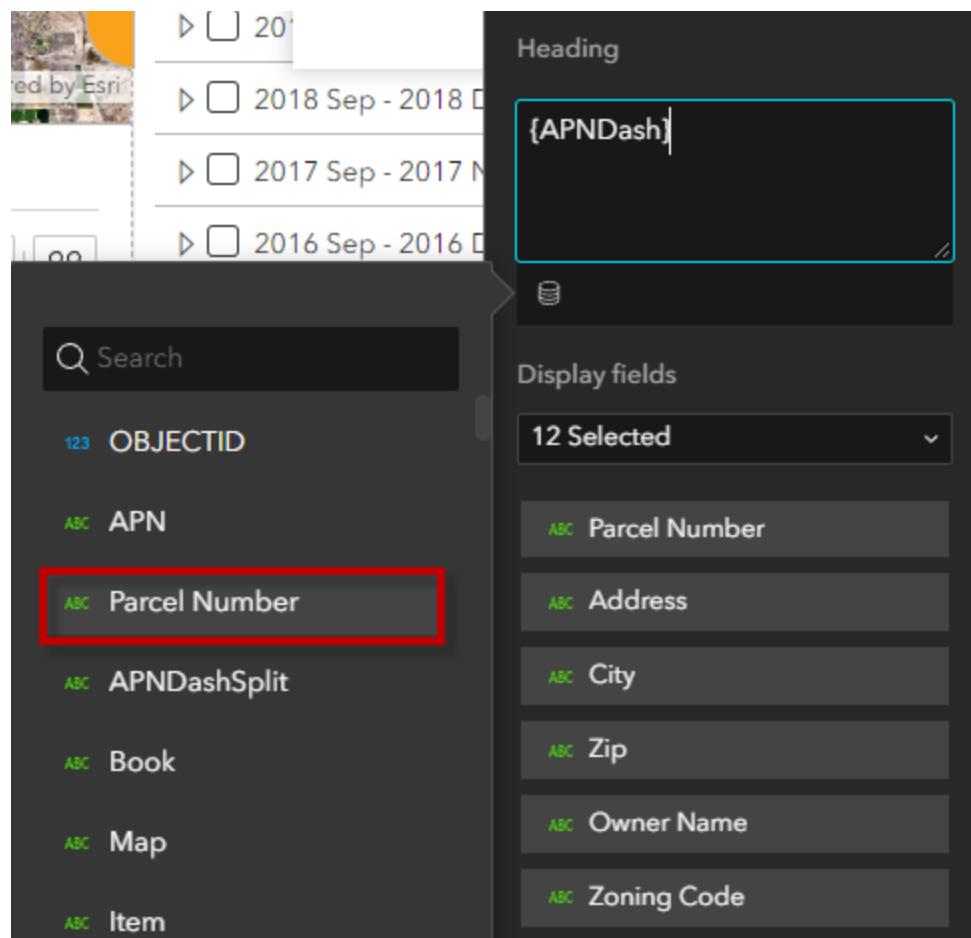
Results | Customize



Select your Heading

The screenshot shows the 'Heading' configuration panel. It includes an 'Expand by default' checkbox, a 'List direction' section with a double-headed arrow icon, and a 'Paging Style' dropdown set to 'Multipage'. In the 'Number of records per page' section, the value '100' is displayed with up and down arrows for adjustment. On the left, there's a 'Display fields' section with a dropdown set to '12 Selected'. A large red arrow points from the text 'Heading' to the icon of a document with a list, which is located in the 'Heading' section.

Heading = {APNDash}

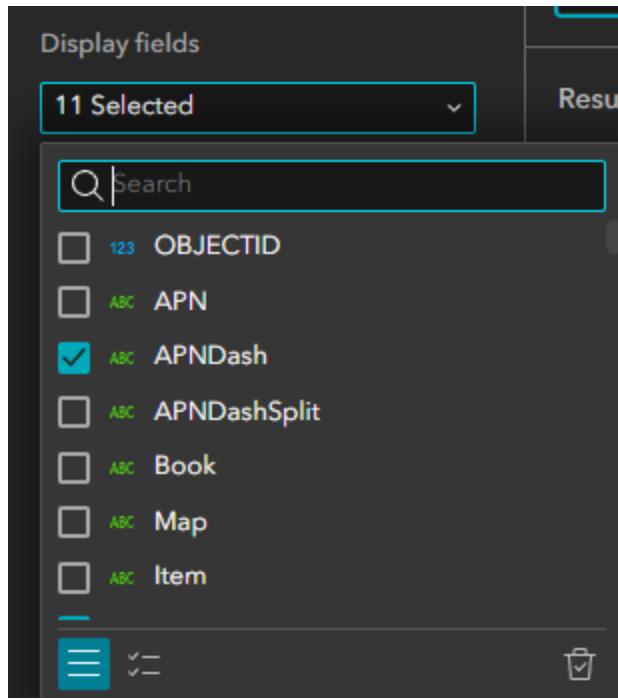


Select your Display Fields

Display fields

12 Selected

- ABC Parcel Number
- ABC Address
- ABC City
- ABC Zip
- ABC Owner Name
- ABC Zoning Code
- ABC MCRWebLink
- ABC SubdivisionName
- ABC Assessor Web Link
- ABC Treasurer Web Link
- 123 Lot Size Sq.ft.
- ABC Building Sketch Web Link



Select the following 20 Display Fields.

Sort them in this order.

Set query

Display fields

20 Selected

- ABC Parcel Number
- ABC Address
- ABC City
- ABC Zip
- ABC Owner Name
- ABC Zoning Code
- ABC SubdivisionName
- ABC MCRNumber
- ABC MCRWebLink
- DeedDate
- ABC DeedNumber
- ABC DeedWebLink
- SaleDate
- 123 SalePrice
- ABC SaleAffidavitWebLink
- ABC Assessor Web Link
- ABC Treasurer Web Link
- ABC Building Sketch Web Link
- 123 Lot Size Sq.ft
- 123 LotSize_Acre

Query

Content Style Action

Query item

+ New query

Parcel

Arrangement style

List direction

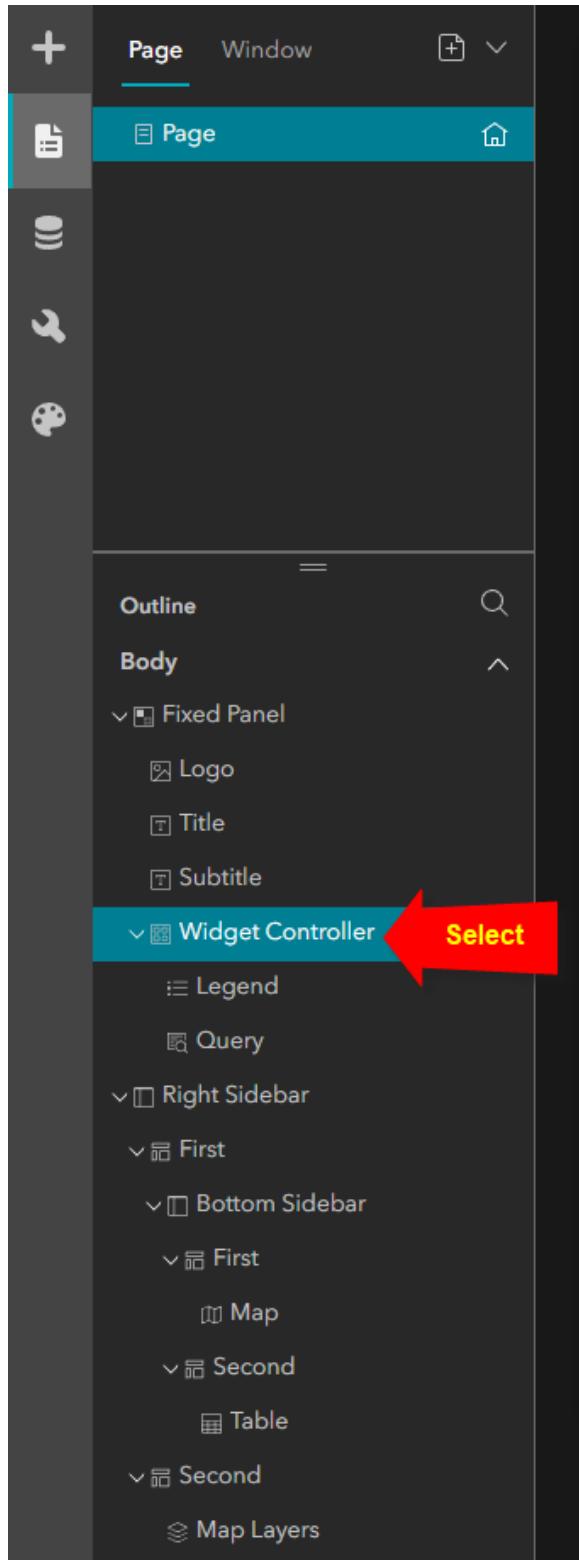
Paging Style

Multipage

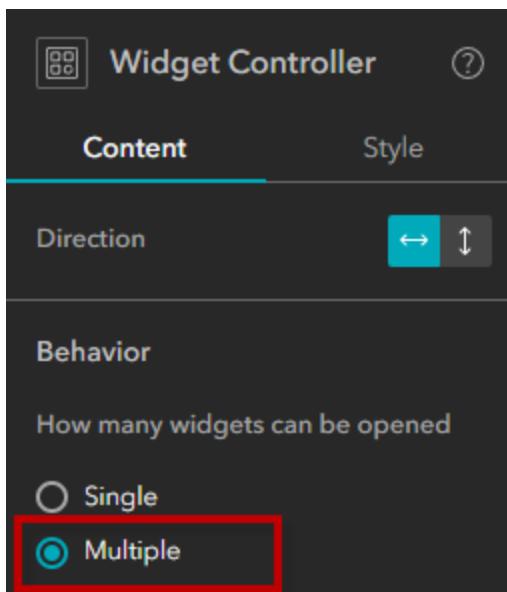
Number of records per page

100

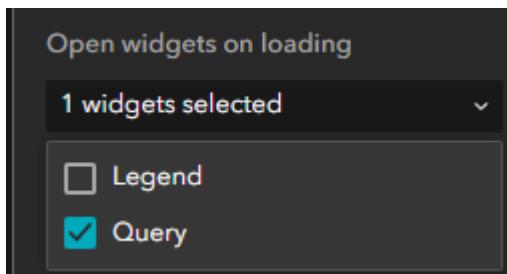
Select the Widget Controller.



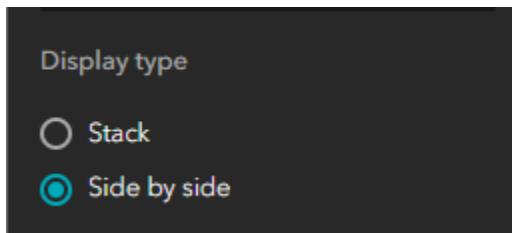
How many widgets can be opened = **Multiple**



Open the Query Widget on Loading



Display Type = Side by side



Save, Publish, View Published Item

<https://localhost:3001/experience/3/>

The screenshot shows the Maricopa County Historical Aerials v4 application. At the top, there's a navigation bar with the county logo and the title "Historical Aerials v4". Below the title is a search bar with a magnifying glass icon. On the left, there's a sidebar with various icons for zooming, panning, and setting filters. The main area is a historical aerial map of Phoenix, AZ, showing streets and buildings. Overlaid on the map is a "Query" dialog box. The dialog has a blue header "Query" with a close button "X". Inside, it says "Parcel" and "Attribute filter ⓘ". There's a text input field containing "Parcel Number is" followed by "211-67-062E". Below the input are two buttons: "Apply" (blue) and "Reset". To the right of the map is a vertical sidebar with a list of filter options. Each option has a checkbox and a three-dot menu icon. The filters listed are: County (checked), Terrain (NAVD88), Parcel (Current), Zip Code, City, Township Range Section, Street (checked), and several date ranges from 2015 Nov - 2016 Feb to 2022 Sep - 2022 Oct. A red callout bubble with the text "Query Widget open by default" points to the "Apply" button on the map.

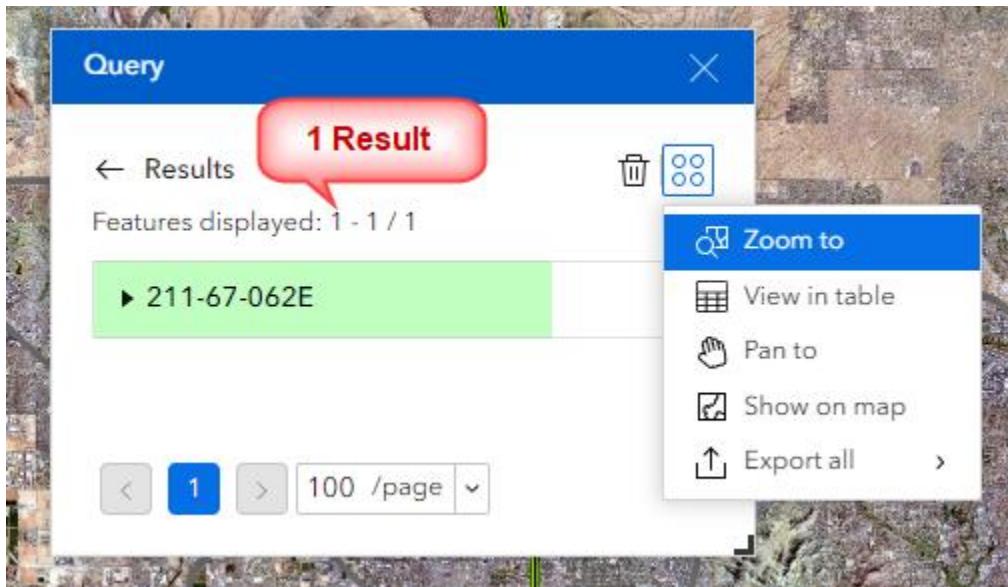
Enter the example Parcel Number = 211-67-062E

This screenshot shows the "Query" dialog box from the previous image, but now the "Parcel Number is" field is highlighted with a green background. The field contains the value "211-67-062E". The "Apply" button is visible at the bottom of the dialog.

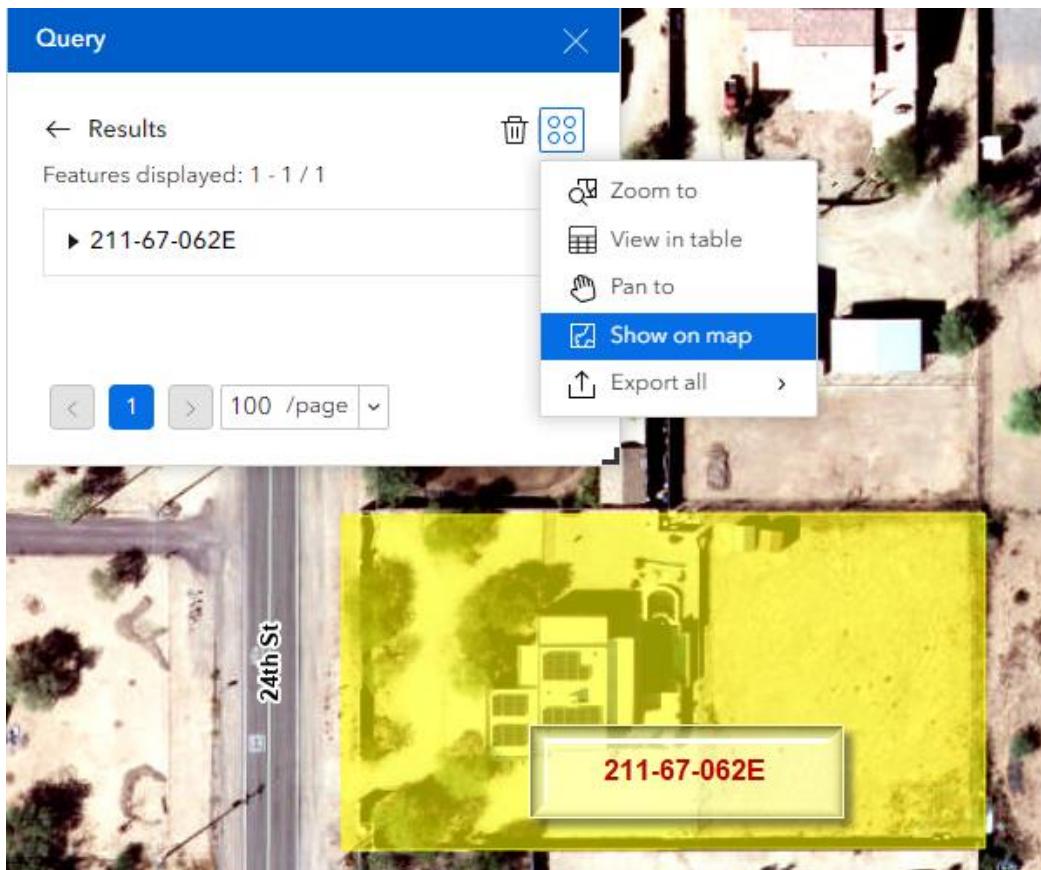
Apply

1 Parcel is found.

Action Menu | Zoom To



Action Menu | Show on Map



Expand the Result to see all 20 Parcel Attributes.

Query

← Results 88 | 88

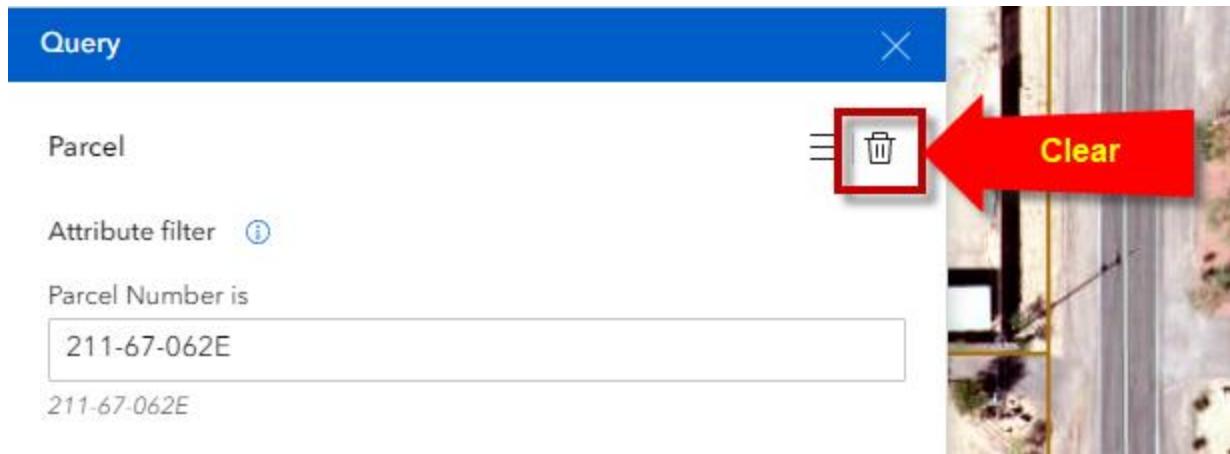
Features displayed: 1 - 1 / 1

211-67-062E	
Parcel Number	211-67-062E
Address	36317 N 24TH ST
City	PHOENIX
Zip	85086
Owner Name	STAUFFER STEVEN T/LESLIE A
Zoning Code	RU-43
SubdivisionName	
MCRNumber	
MCRWebLink	
DeedDate	5/15/2022, 5:00 PM
DeedNumber	20220422576
DeedWebLink	View
SaleDate	4/30/2022, 5:00 PM
SalePrice	890,000.00
SaleAffidavitWebLink	View
Assessor Web Link	View
Treasurer Web Link	View
Building Sketch Web Link	View
Lot Size Sq.ft	46,814
LotSize_Acre	1.07

◀ 1 ▶ 100 /page ▼

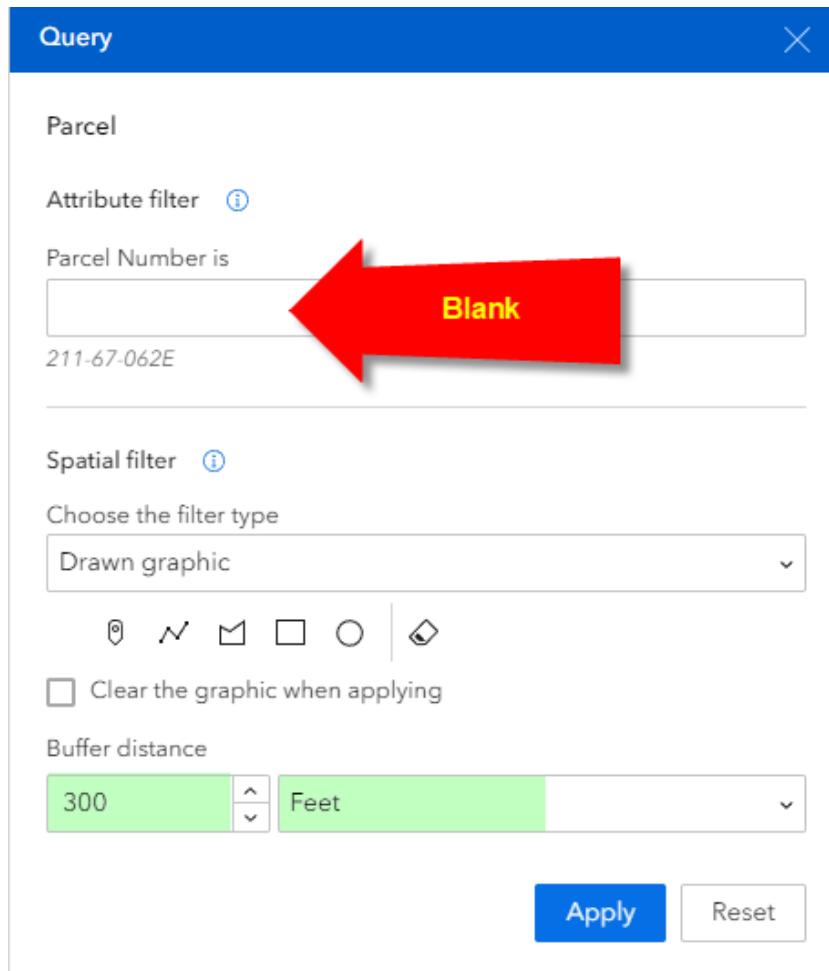


Clear the Results



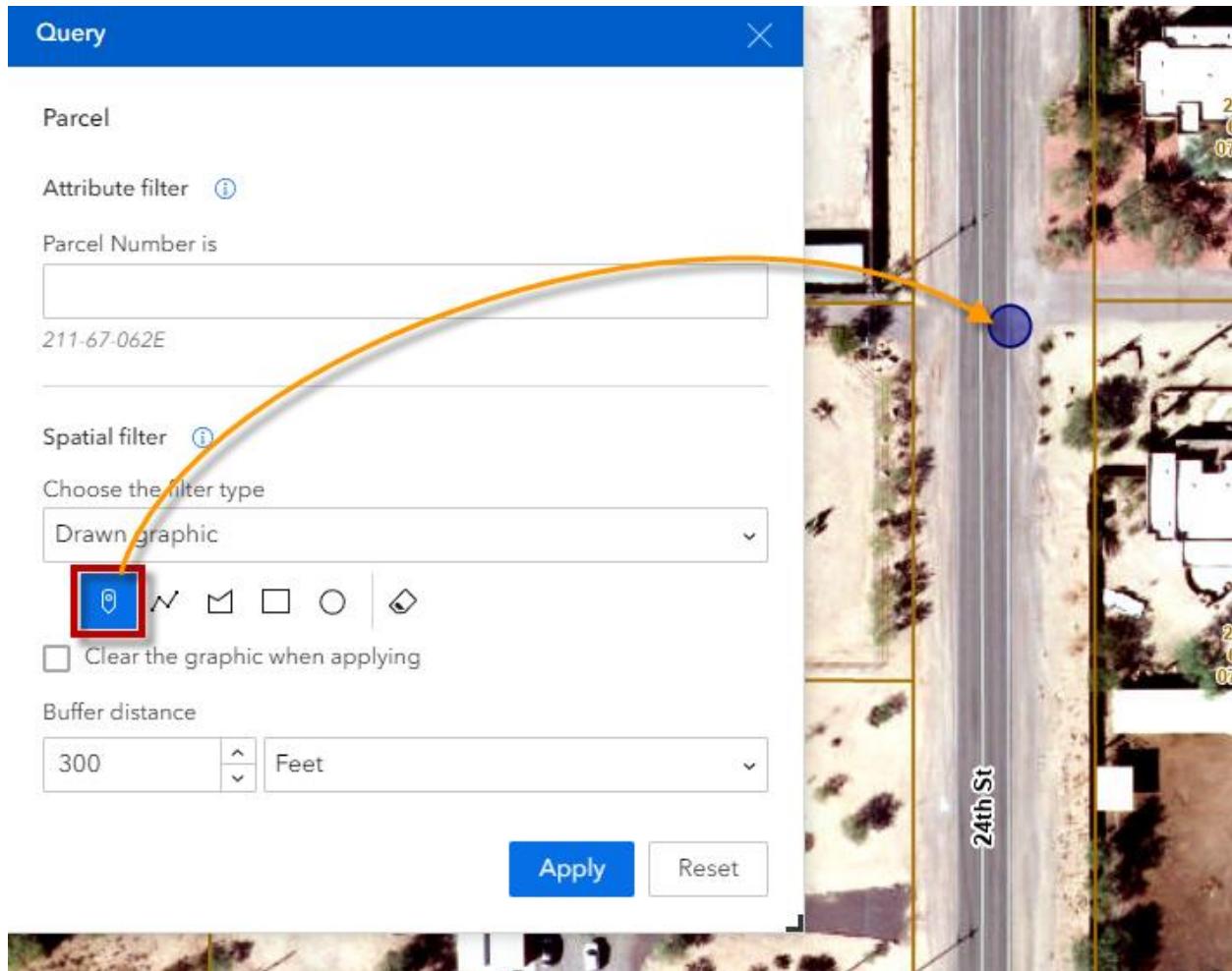
Clear the Attribute Filter.

Apply a buffer distance of 300 feet.



Engage the Draw a Point Tool.

Drop a point on the map.



A 300 feet purple buffer is drawn.

The screenshot shows a GIS application interface with a 'Query' search bar at the top. In the search bar, 'Parcel' is selected under 'Attribute filter'. A search term '211-67-062E' is entered. Under 'Spatial filter', 'Drawn graphic' is selected, and a circular buffer of 300 feet is drawn around the specified parcel. The buffer is highlighted in purple. The map displays various parcels with their unique identifiers labeled (e.g., 211-67-062E, 211-67-079F). A red arrow points from the '300 ft' label to the purple buffer. Below the map, there are buttons for 'Apply' and 'Reset'.

Apply

Turn on the Parcel Layer.

The screenshot shows a GIS application interface with a legend on the right side. The legend items are: County (checked), Terrain (NAVD88) (unchecked), Parcel (Current) (checked and highlighted with a green background), Zip Code (unchecked), and City (unchecked). The map on the left shows several parcels, some of which are highlighted in yellow, indicating they are selected or part of the current buffer.

There are 7 Parcels within 300 feet of the point you dropped on the map.

Query

← Results

Features displayed: 1 - 7 / 7

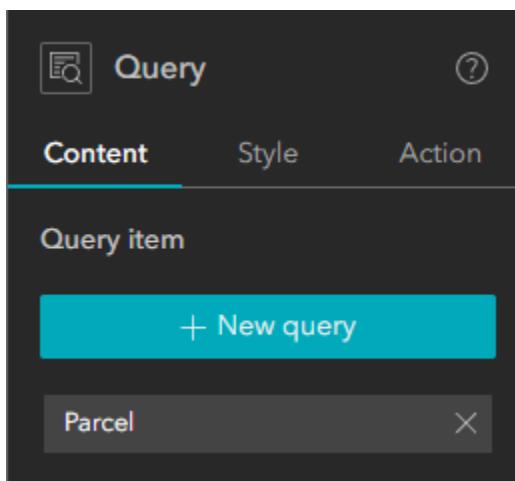
- ▶ 211-67-079B
- ▶ 211-67-079C
- ▶ 211-67-079E
- ▶ 211-67-079F
- ▶ 211-69-057D
- ▶ 211-69-060H
- ▶ 211-69-060G

< 1 > 100 /page ▾

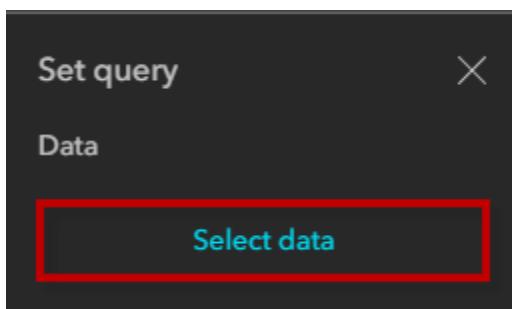
24th St

Add the Subdivision Query

Add New Query



Select data



Select Subdivision

The screenshot shows a 'Select data' interface on the left and a 'Query' configuration panel on the right.

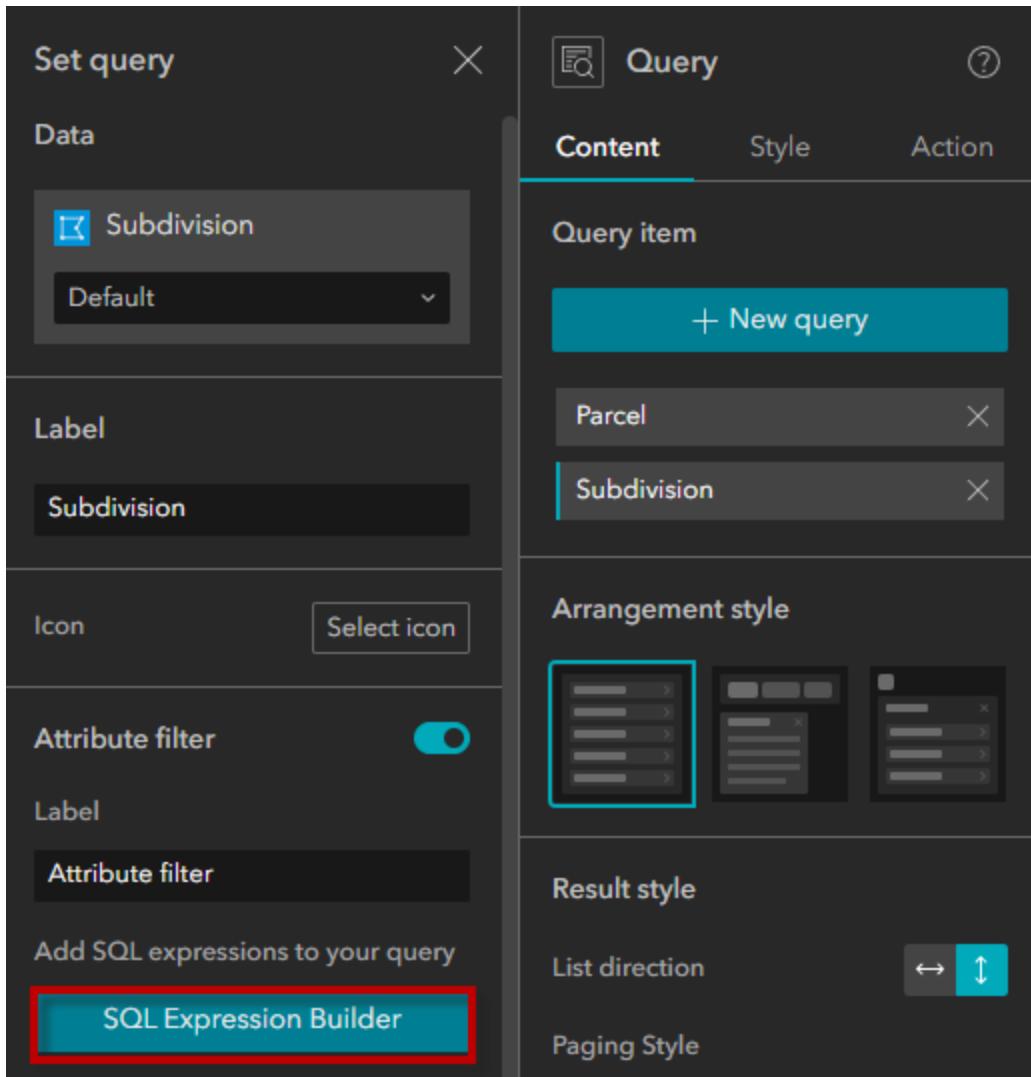
Select data:

- Type: All
- Historical Aerials EXB
 - County
 - Terrain (NAVD88) / ...
- Parcel (Current)
 - Subdivision (highlighted with a red border)
 - Parcel
- Zip Code
- City

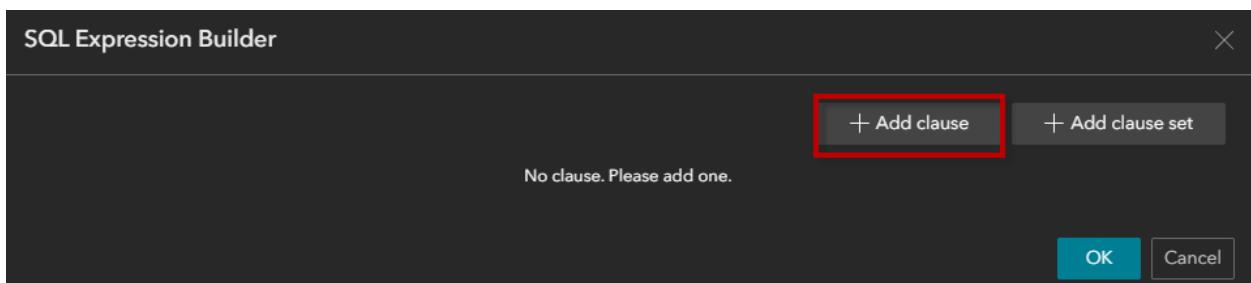
Query:

- Content:** Query item
 - + New query
 - Parcel
 -
- Arrangement style:** A grid of three arrangement style options, with the first one highlighted by a cyan border.
- Result style:**
- List direction:** A set of arrows for sorting.

SQL Expression Builder

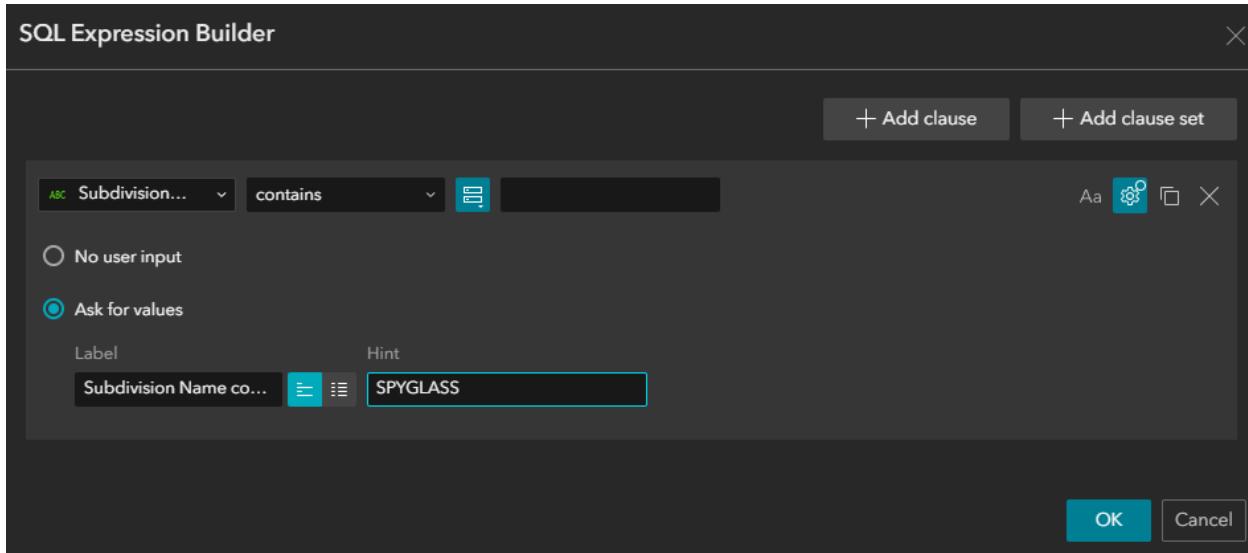


Add clause



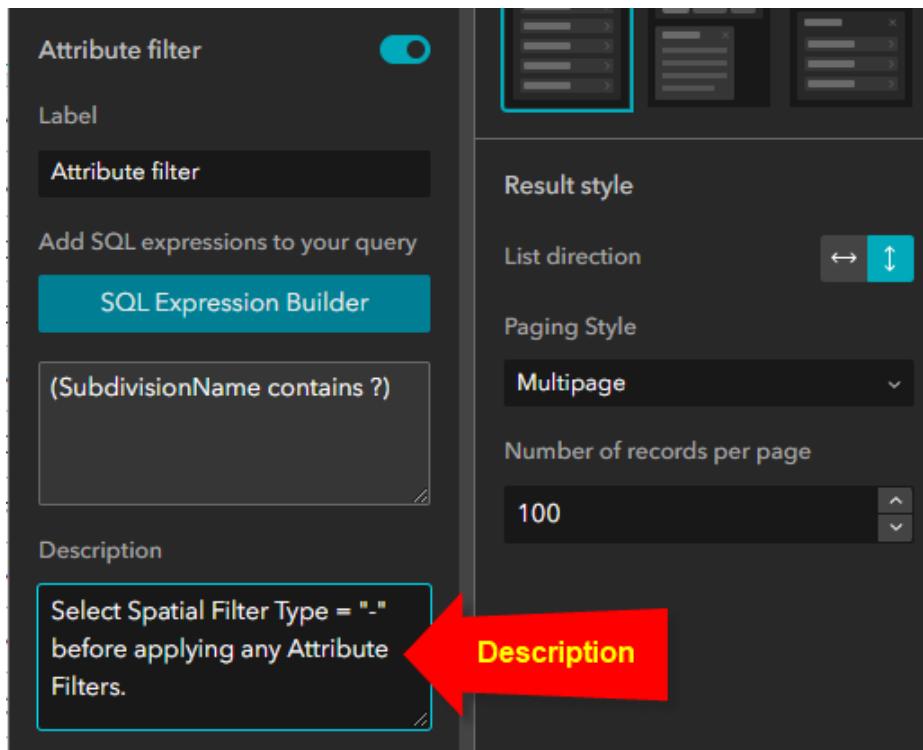
Subdivision Name Contains

Hint SPYGLASS



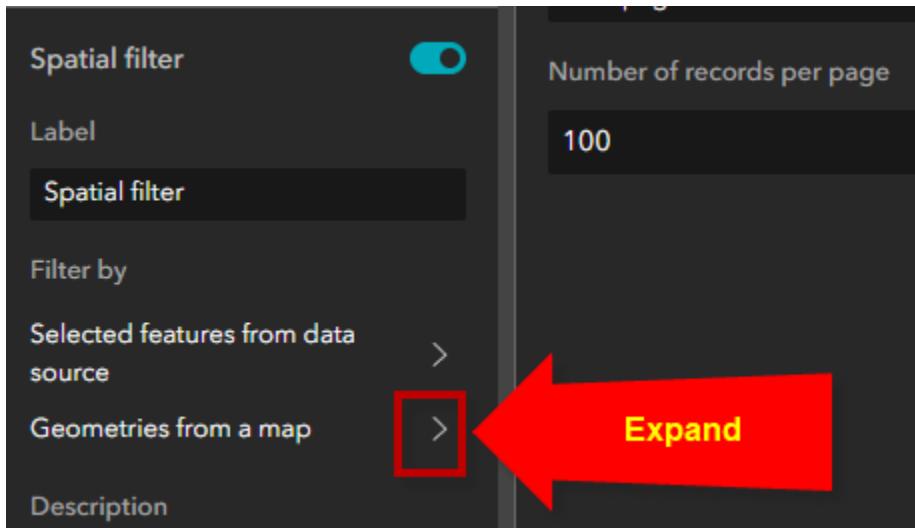
Attribute Filter Description:

Select Spatial Filter Type = "-" before applying any Attribute Filters.

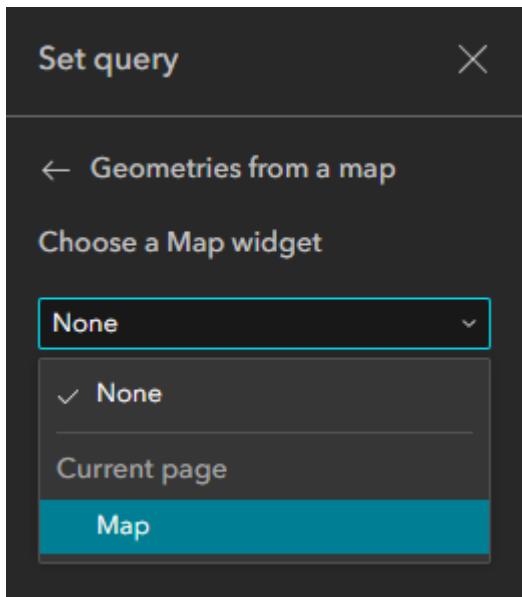


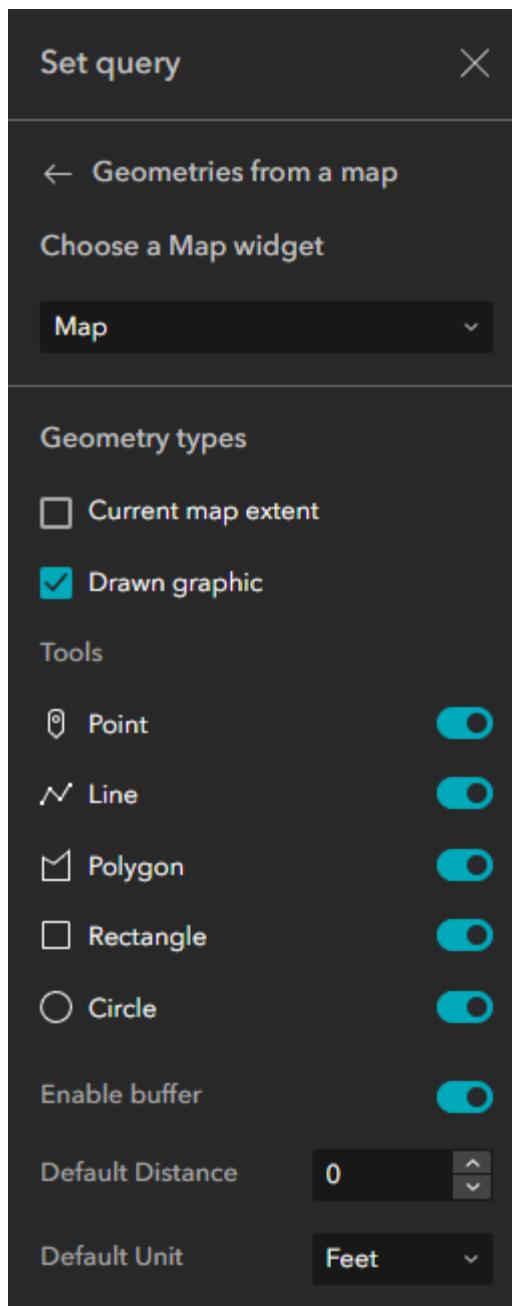
Turn on the Spatial Filter

Filter by Geometries from a map.



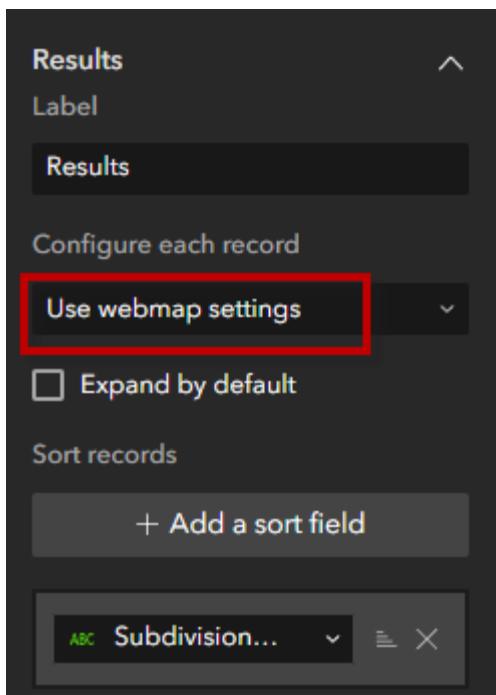
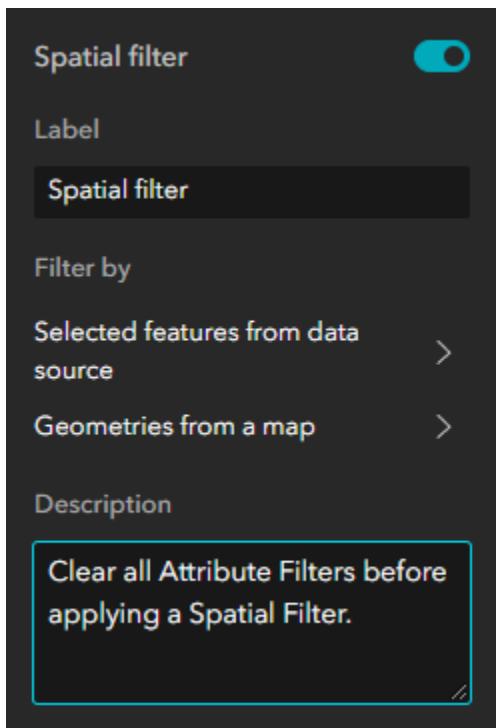
Choose Map widget = Map





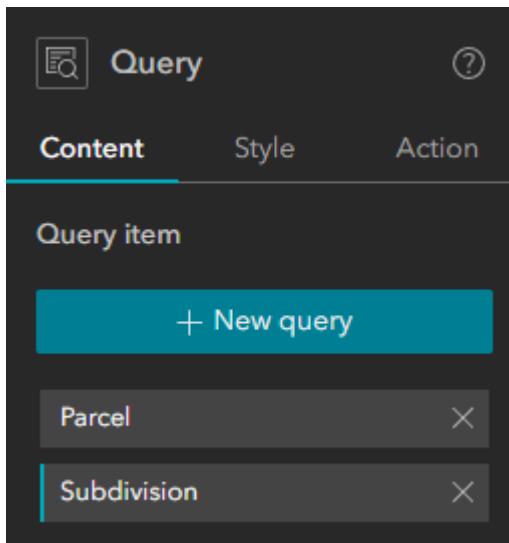
Spatial Filter Description:

Clear all Attribute Filters before applying a Spatial Filter.



Add the ZIP Code Query

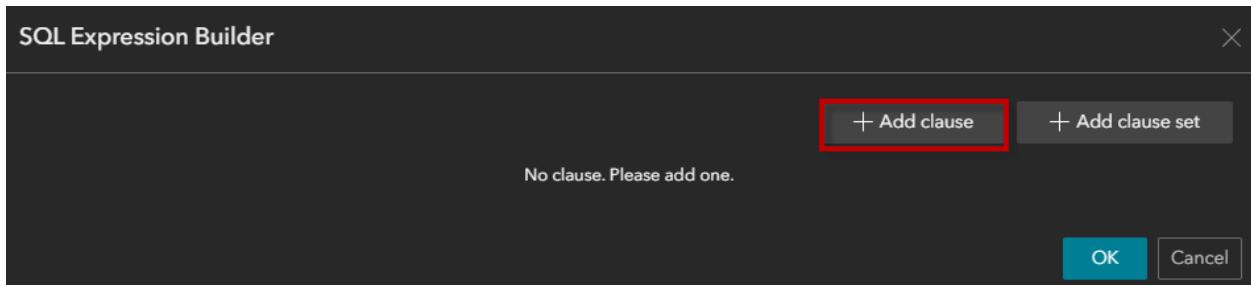
Add New Query



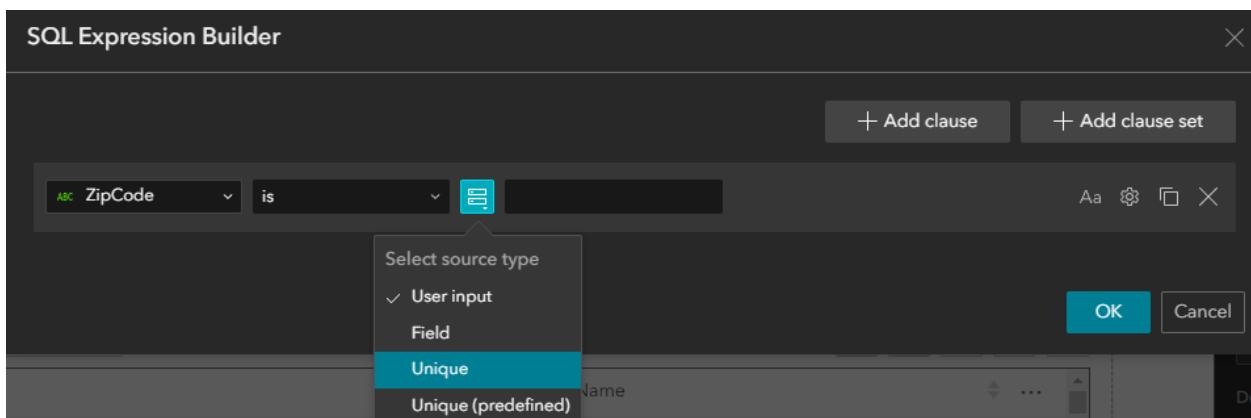
The screenshot displays two windows side-by-side. On the left is a 'Select data' window with a search bar and a 'Type' dropdown set to 'All'. It shows a hierarchical tree of spatial data types: 'Parcel Map EXB' (expanded), 'Parcel' (under 'Parcel Map EXB'), 'ZIP Code' (under 'Parcel Map EXB'), 'ZIP Code' (under 'ZIP Code') which is highlighted with a red box, 'City', 'Township Range Sec...', 'Street / Street & Hig...', and 'County'. On the right is the same 'Query' interface as the first screenshot, showing the 'Content' tab, a '+ New query' button, and the selected items 'Parcel' and 'Subdivision'. Below these, sections for 'Arrangement style' and 'Result style' are visible.

SQL Expression Builder

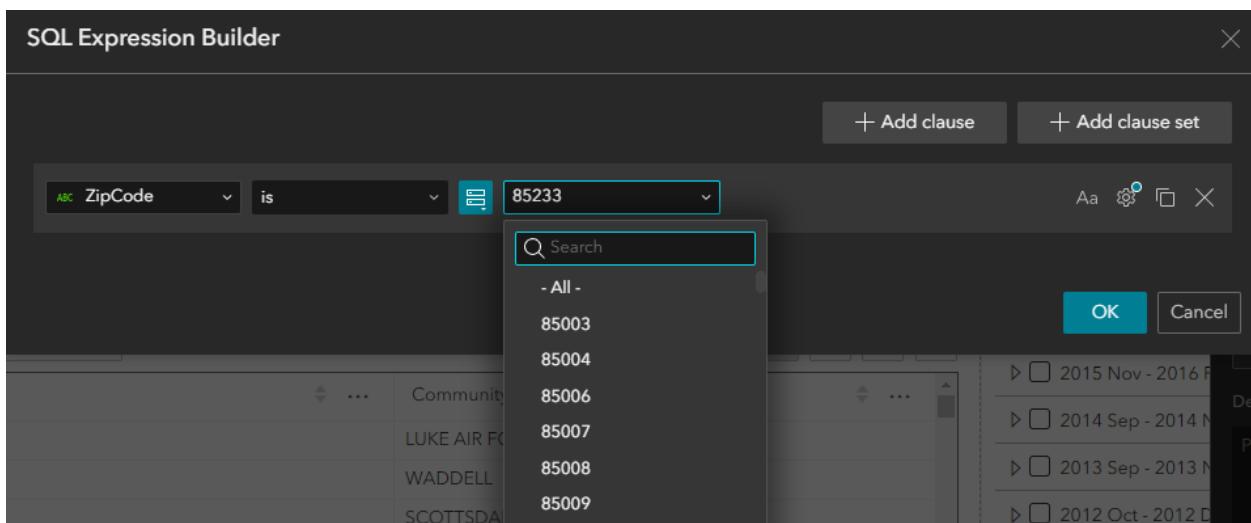
Add Clause



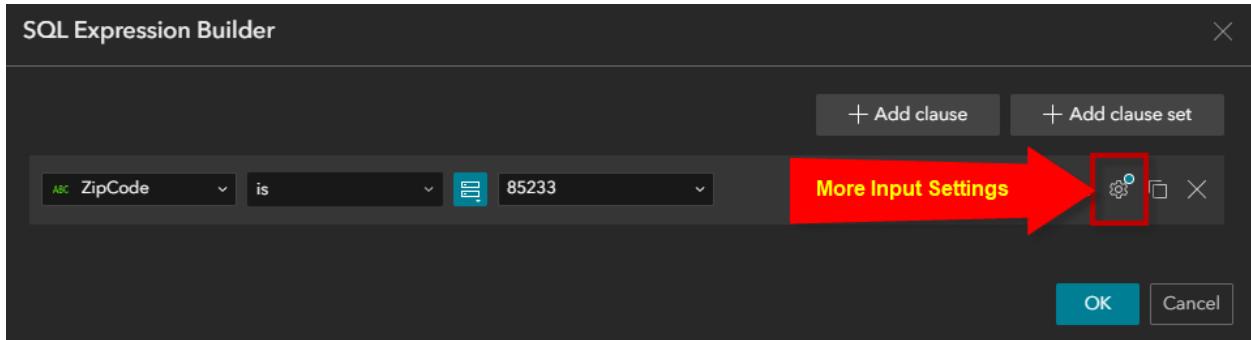
ZipCode is Unique



Zip Code is 85233

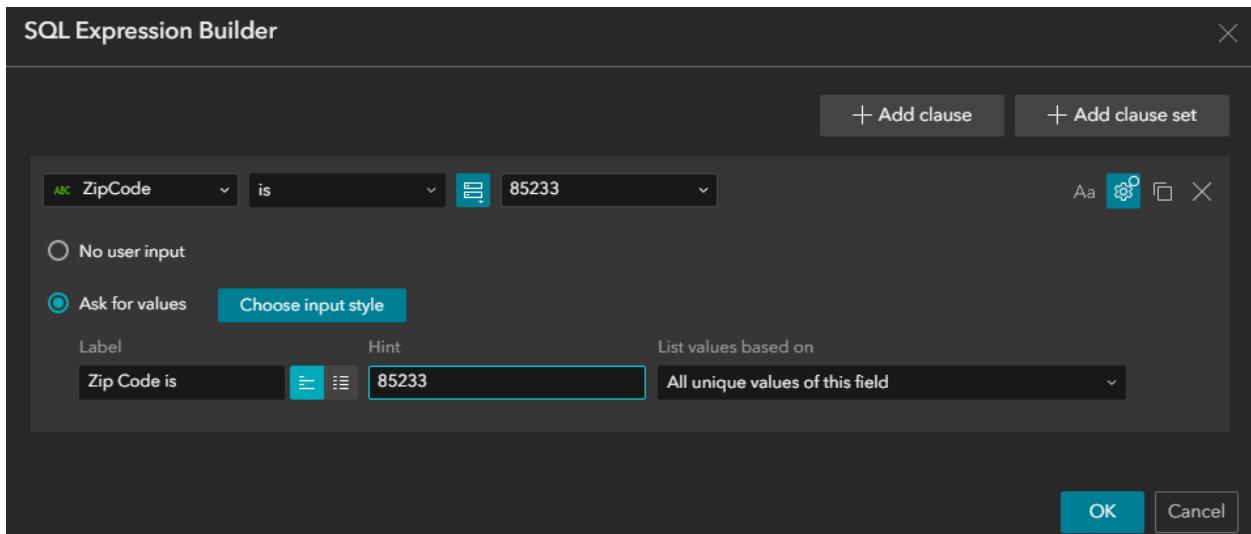


More Input Settings



Ask for values

Hint = 85233



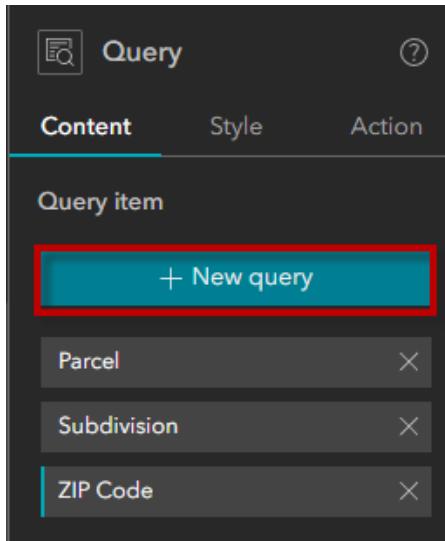
Turn off the Spatial Filter.

The screenshot shows the configuration interface for an attribute filter. On the left, under 'Attribute filter', there is a 'Label' section and a 'SQL Expression Builder' button. Below it is a code editor containing the SQL expression `(ZipCode = '85233')`. Under 'Description', there is a text area with placeholder text: 'Please describe the filter.' On the right, there are sections for 'Arrangement style' (with three grid icons), 'Result style' (with 'List direction' and 'Paging Style' settings), and 'Spatial filter' (with a toggle switch). A large red arrow points from the 'Turn Off' button in the 'Result style' section to the 'Spatial filter' toggle switch. At the bottom, there is a 'Results' section with 'Label' and 'Results' options, and a dropdown menu set to 'Use webmap settings'. There is also a checkbox for 'Expand by default'.

Configure each record = Use webmap settings

Add the City Query

New Query



Select data

Type All

- Parcel Map EXB
 - Parcel
 - ZIP Code
 - City
 - City
 - Township Range Sec...
 - Street / Street & Hig...
 - County

Query

Content Style Action

Query item

+ New query

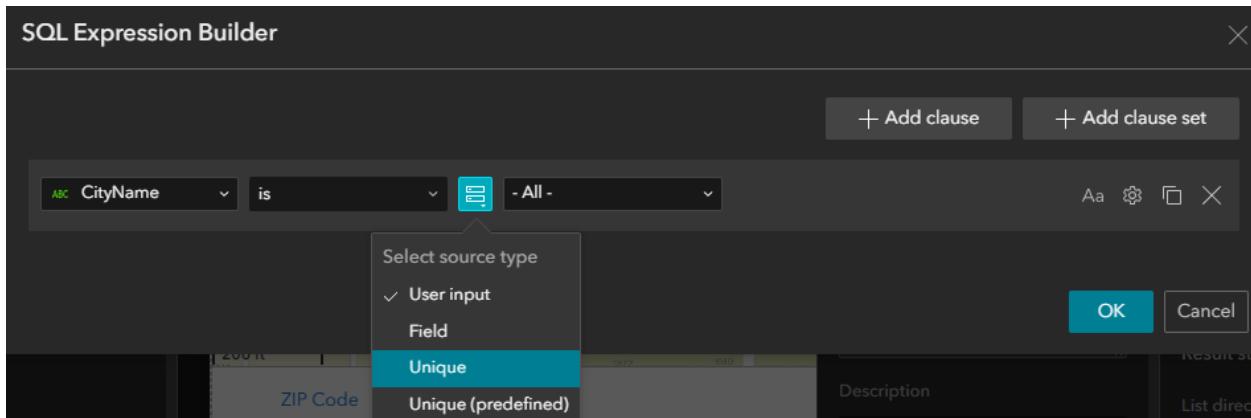
Parcel Subdivision ZIP Code

Arrangement style

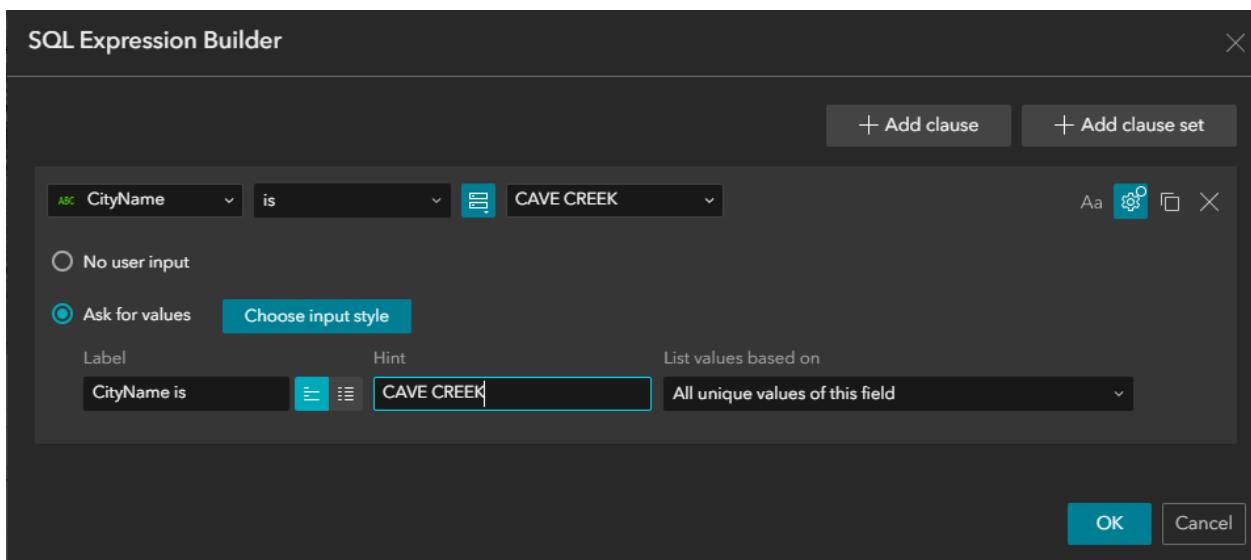
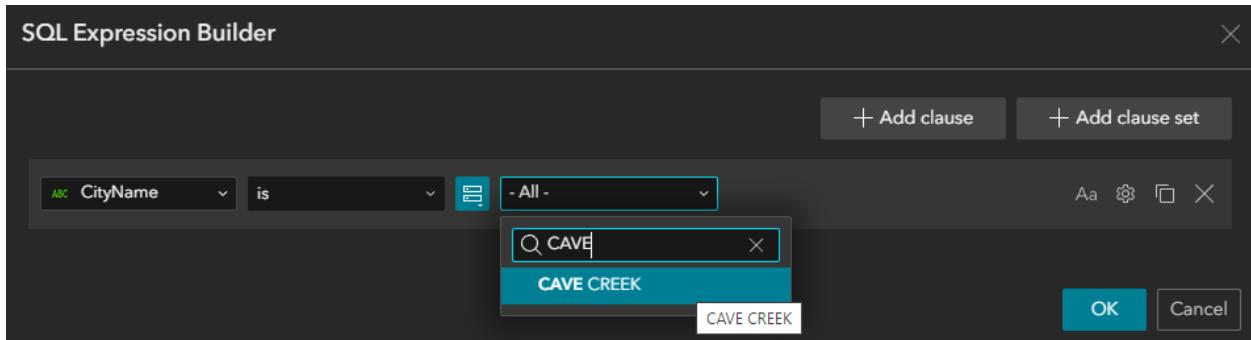
SQL Expression Builder

Add Clause

CityName is Unique



City Name is CAVE CREEK



Turn off the Spatial Filter

The screenshot shows the SQL Expression Builder interface. At the top, a teal header bar displays the title "SQL Expression Builder". Below the header, a large text input field contains the SQL expression: "(CityName = 'cave creek')". Underneath this field is a "Description" section with a placeholder text area labeled "Please describe the filter.". To the right of the description area is a toggle switch labeled "Spatial filter", which is currently set to "Off" (indicated by a grey circle). Below the toggle switch is a section titled "Results" with a small upward arrow icon. This section includes a "Label" field containing the text "Results", a dropdown menu set to "Use webmap settings", and a checkbox labeled "Expand by default" which is unchecked. Further down, there is a "Sort records" section with a button "+ Add a sort field" and a dropdown menu currently showing "CityName".

Add the Township, Range, Section Query

Add New Query

Select Section Label

The screenshot shows two overlapping interface panels. The left panel is titled 'Select data' and lists various geographical features under 'Parcel Map EXB'. The right panel is titled 'Query' and shows a list of selected items under 'Query item'.

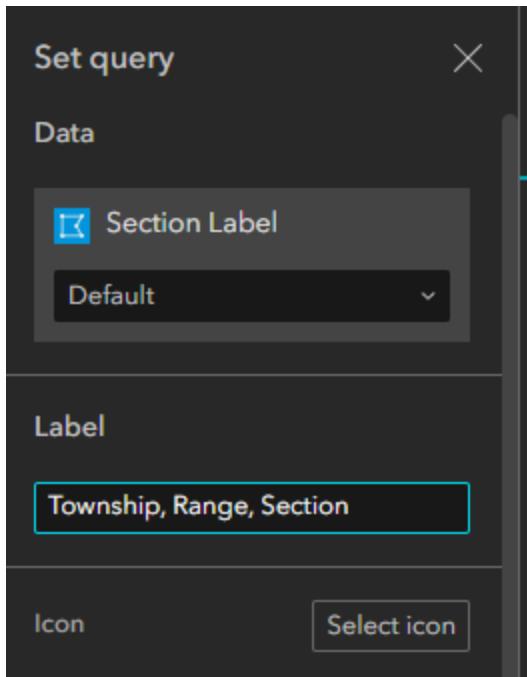
Select data Panel:

- Type: All
- Parcel Map EXB
 - Parcel
 - ZIP Code
 - City
 - Township Range Sec...
 - Township & Ra...
 - Section Outline
 - Section Label** (highlighted with a red box)
 - Street / Street & Hig...
 - County

Query Panel:

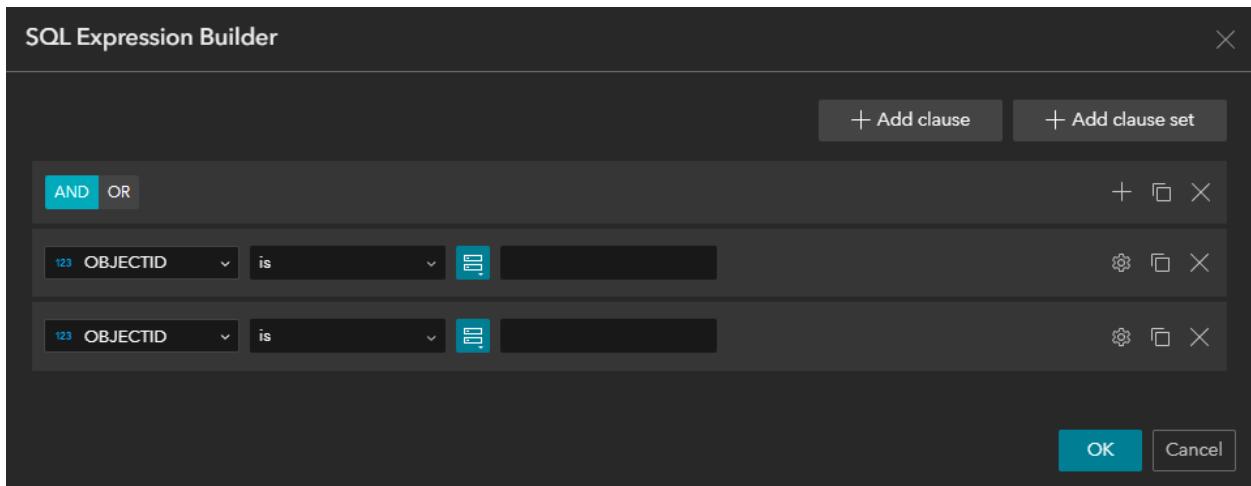
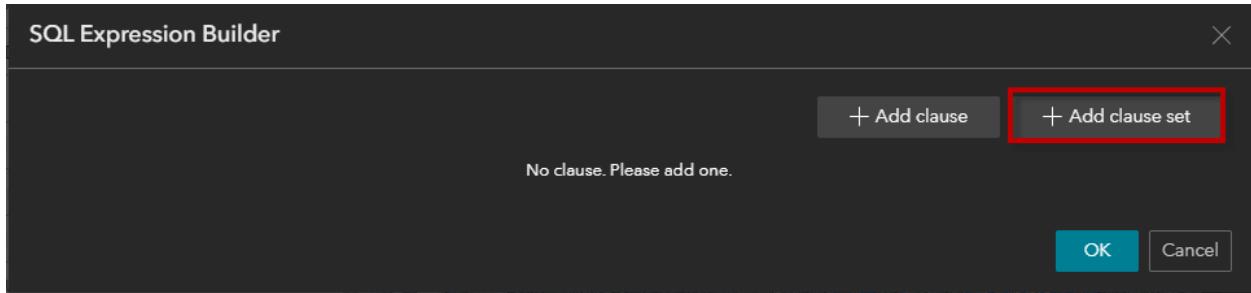
- Content tab is selected.
- Query item section:
 - + New query
 - Parcel
 - Subdivision
 - ZIP Code
 - City
 -
- Arrangement style section: A preview of the 'Section Label' arrangement style is shown.
- Result style section: A preview of the 'Section Label' result style is shown.

Label = Township, Range, Section

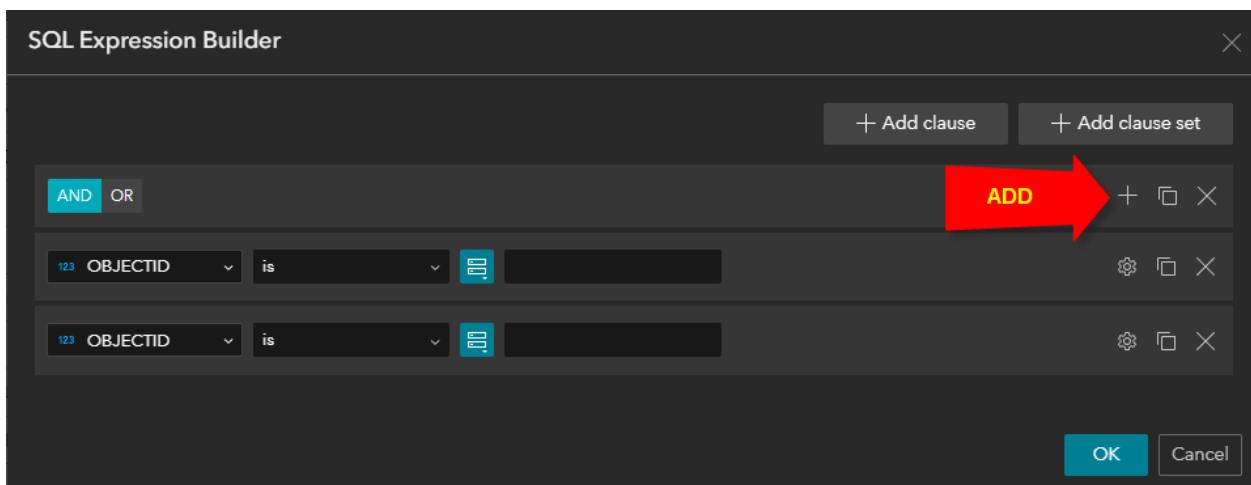


SQL Expression Builder

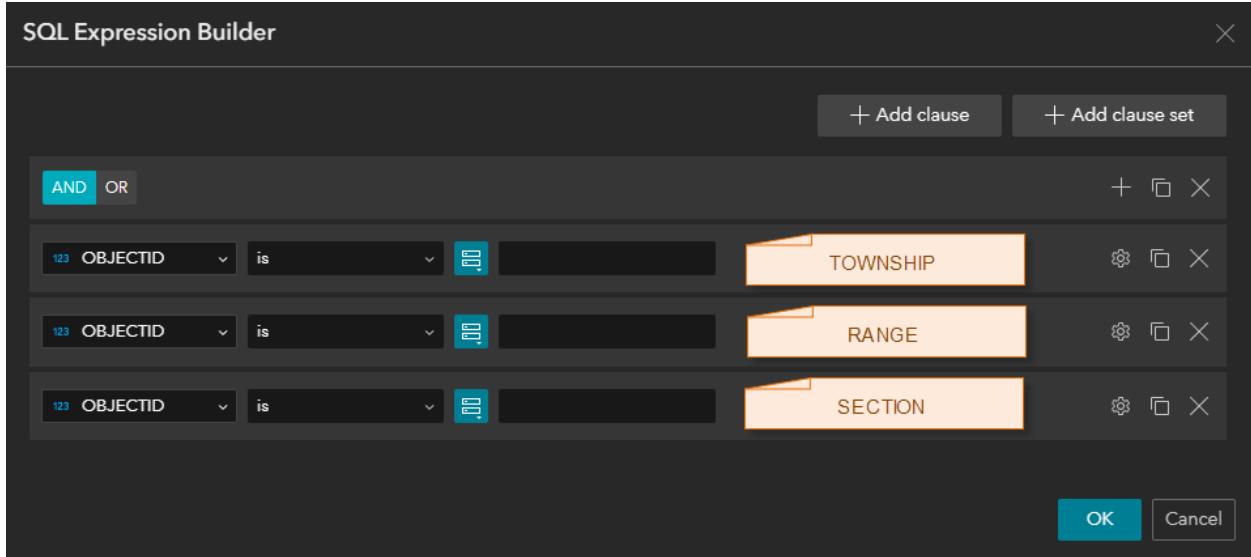
Add Clause Set



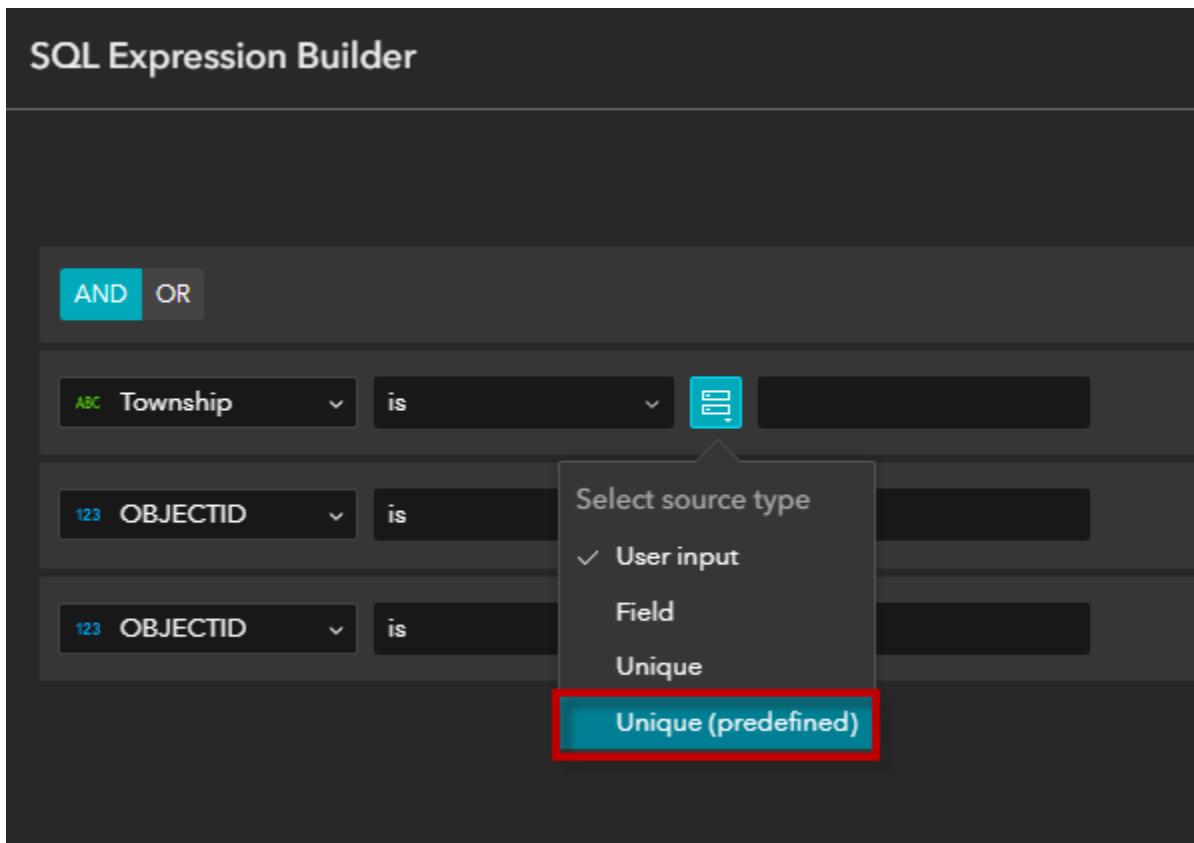
ADD CLAUSE



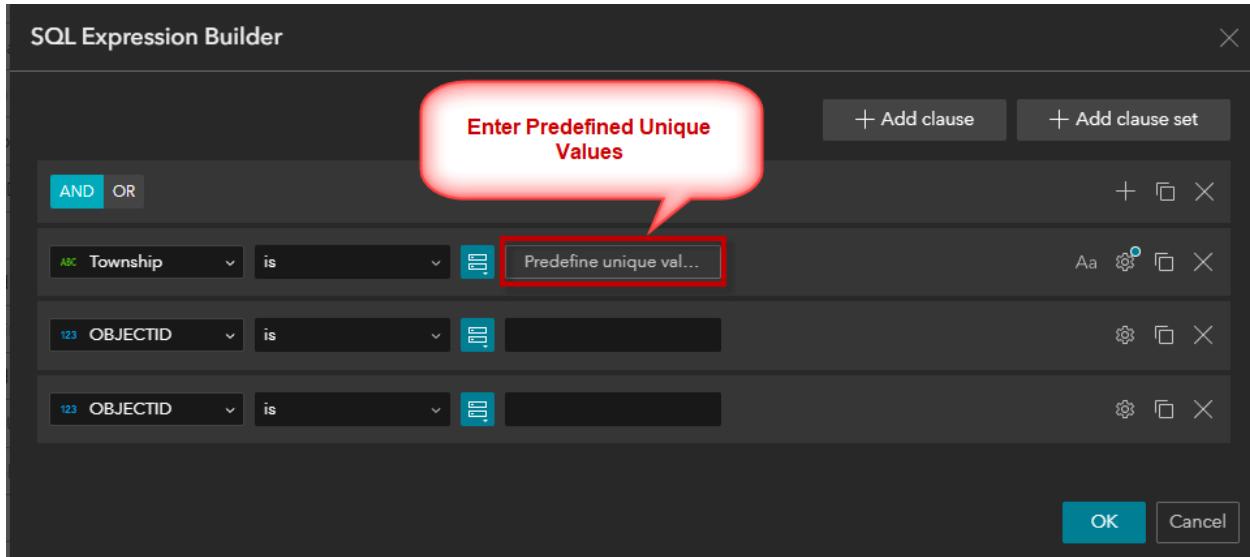
You have 3 Clauses for entering TOWNSHIP, RANGE, SECTION



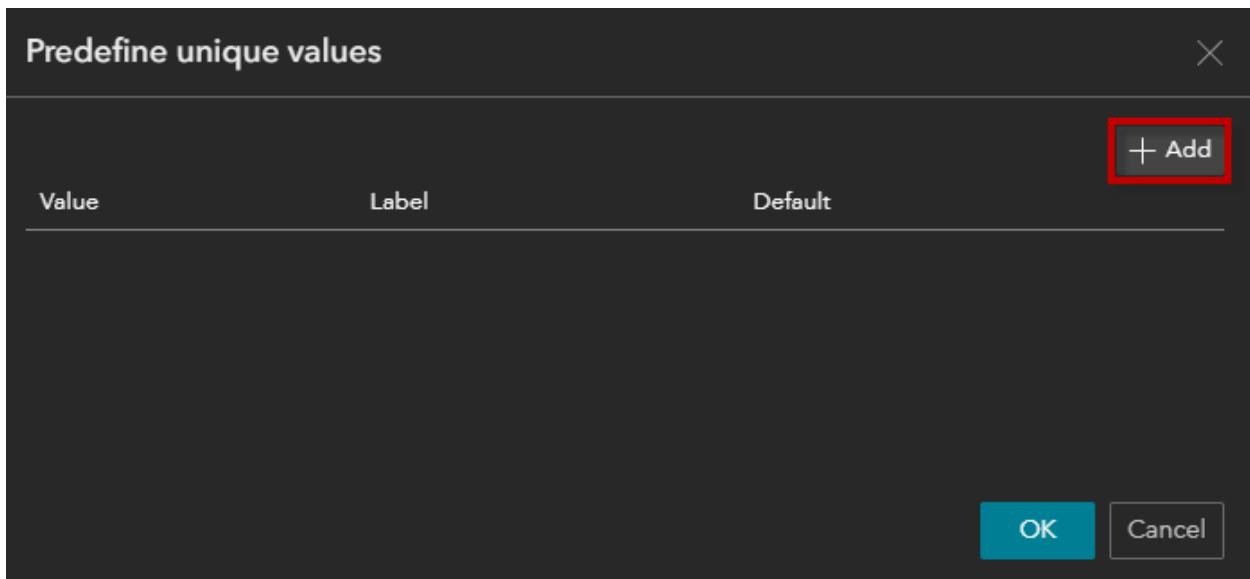
Township is Unique (predefined)

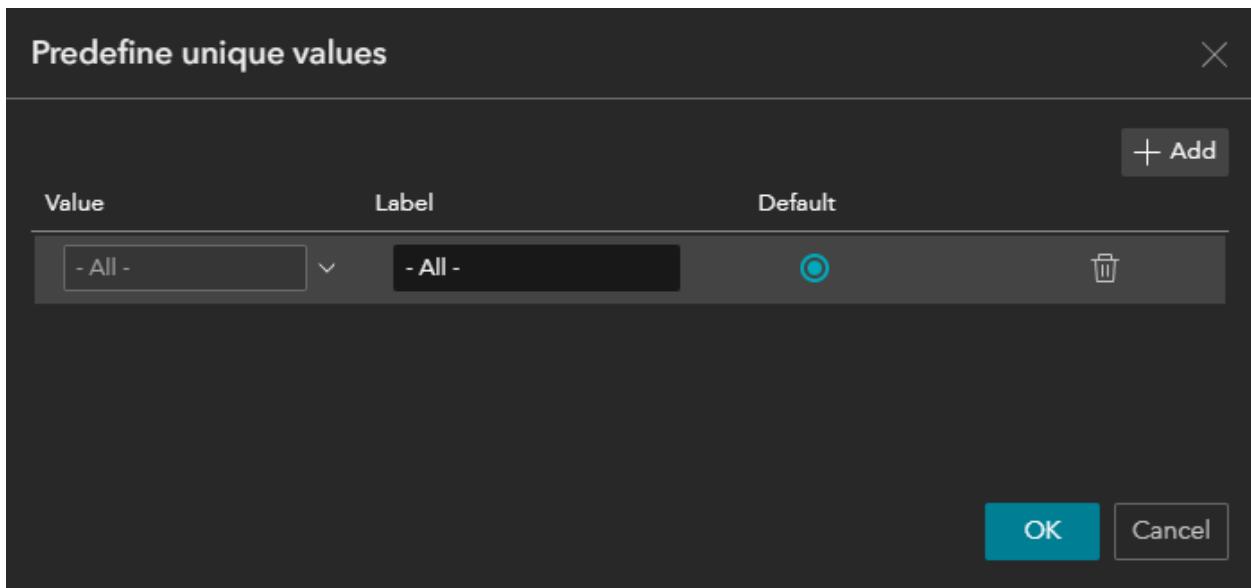


Enter Predefined Unique Values

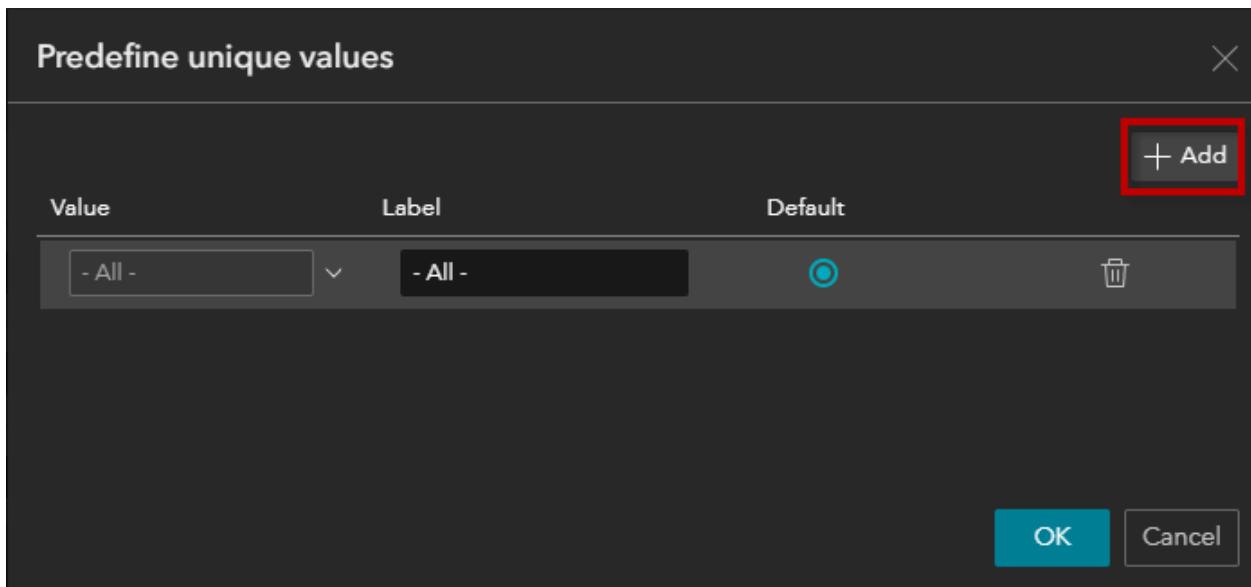


Add



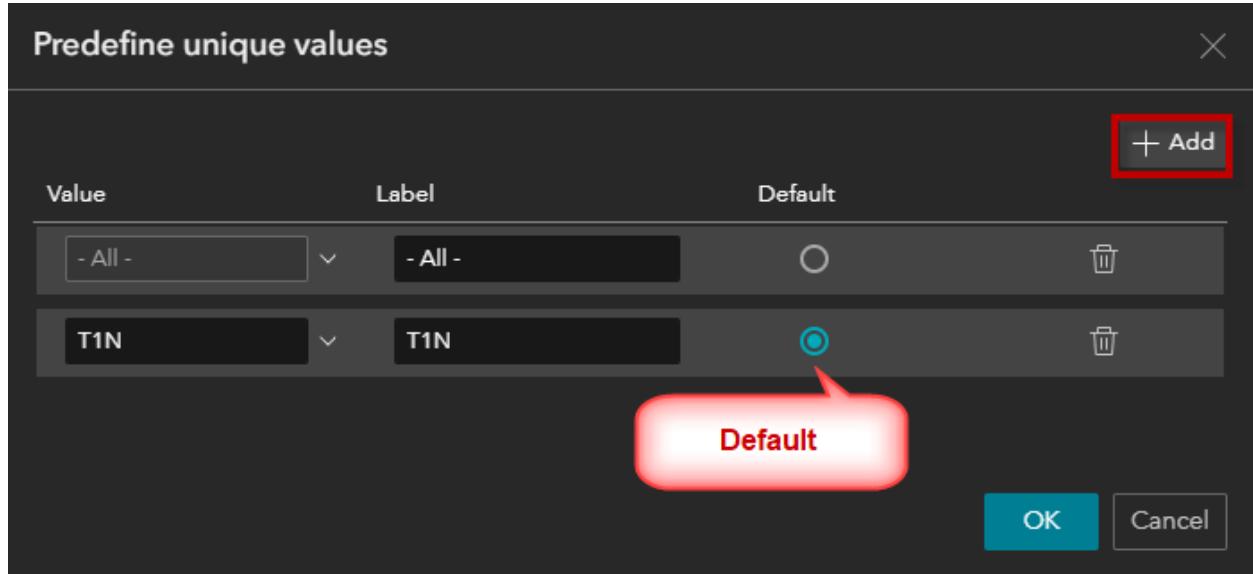


ADD



Add Value = T1N

Change the Default value to T1N



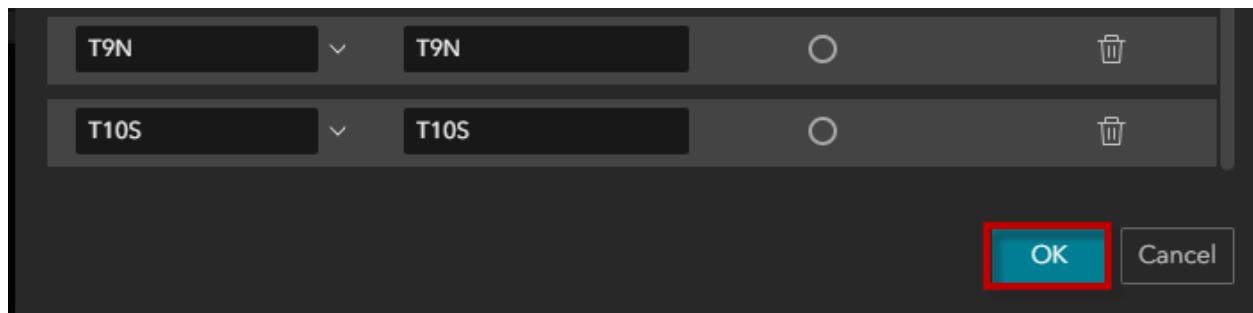
Keep adding the predefined Township Values as shown.

Predefine unique values

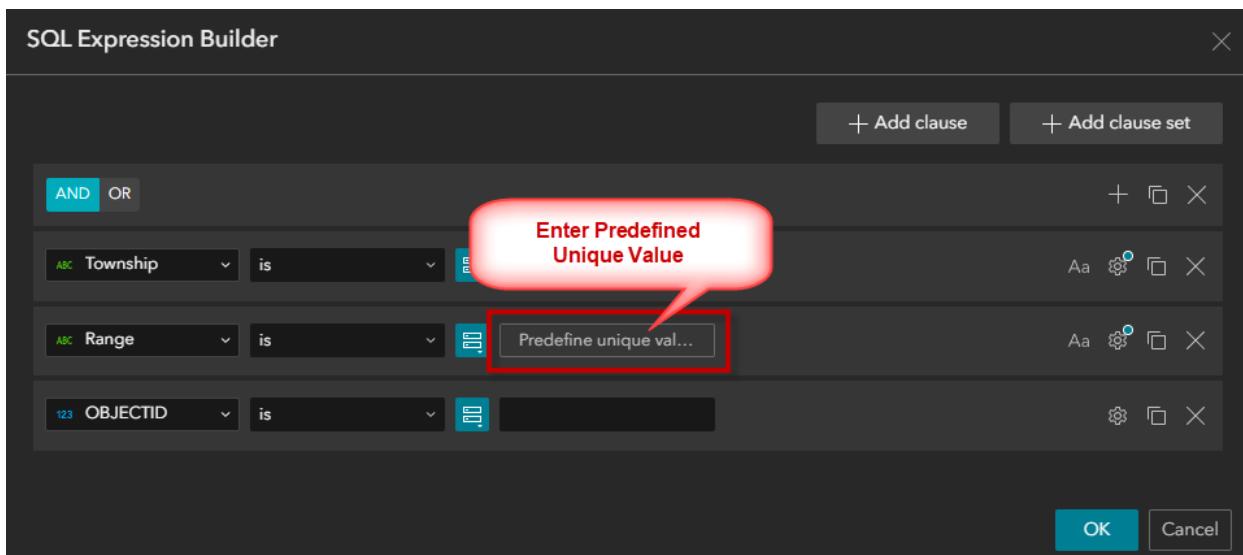
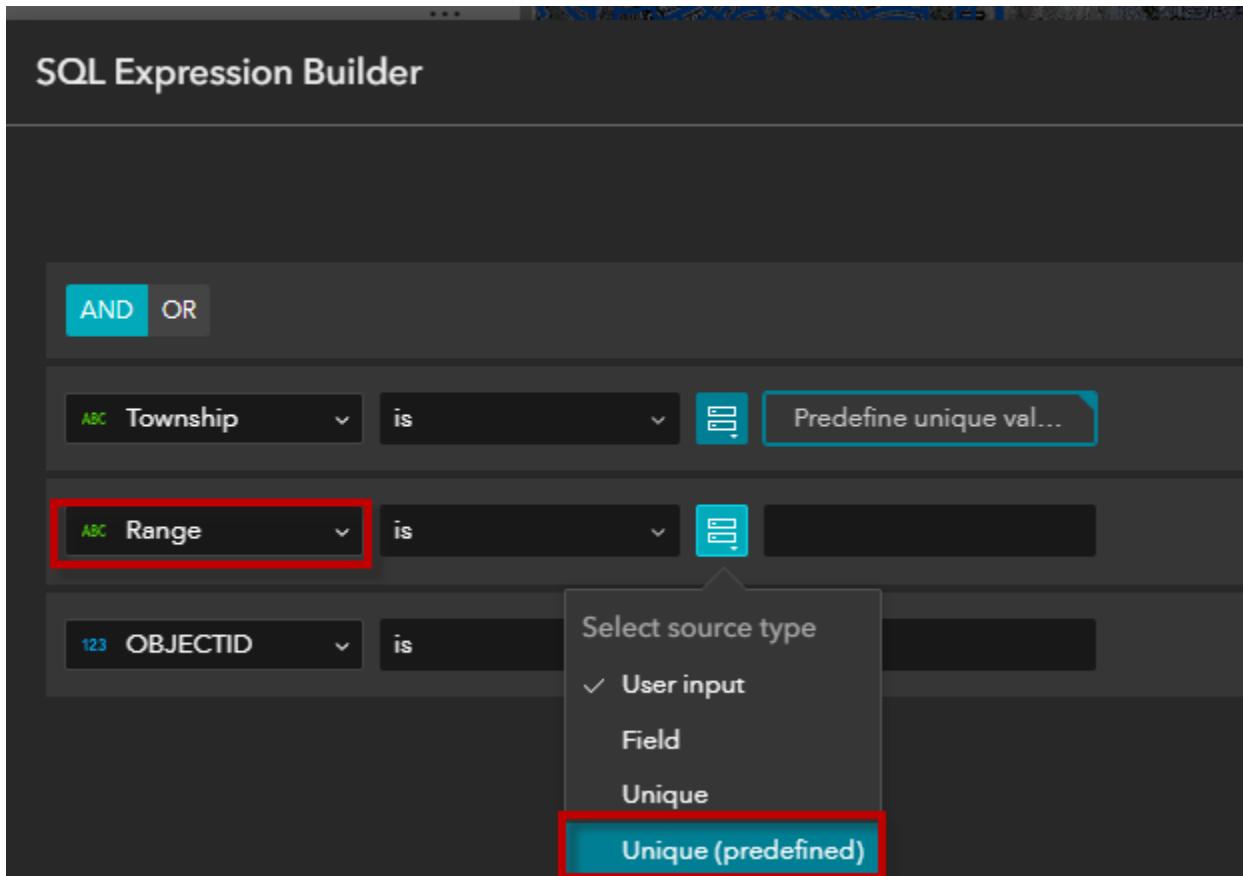
X

+ Add

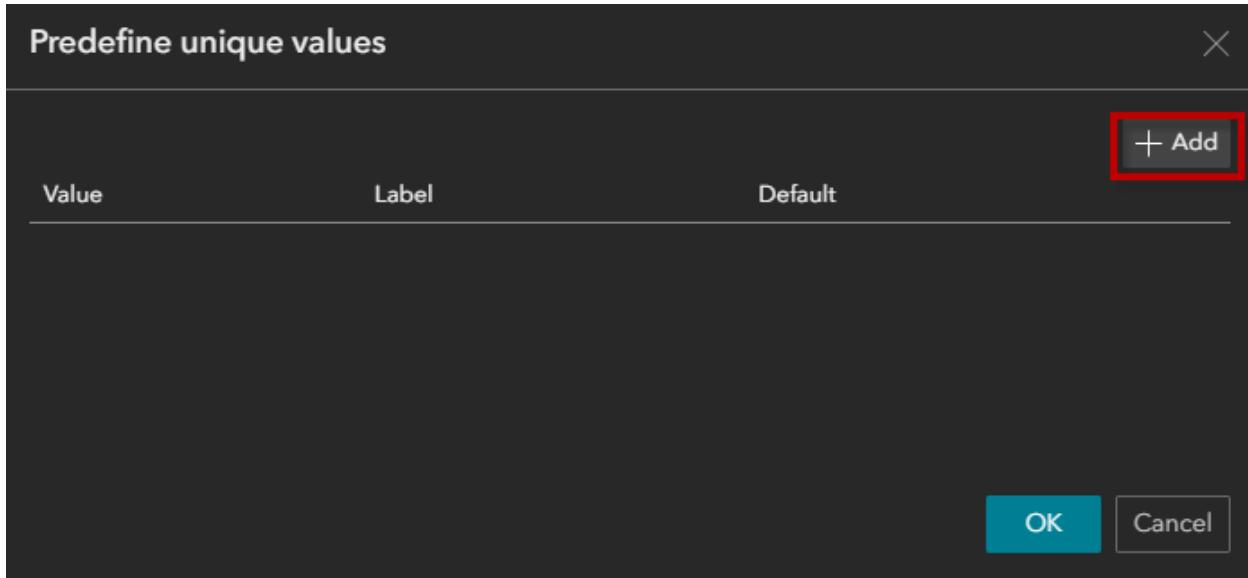
Value	Label	Default	
- All -	- All -	<input type="radio"/>	
T1N	T1N	<input checked="" type="radio"/>	
T1S	T1S	<input type="radio"/>	
T2N	T2N	<input type="radio"/>	
T2S	T2S	<input type="radio"/>	
T3N	T3N	<input type="radio"/>	
T3S	T3S	<input type="radio"/>	
T4N	T4N	<input type="radio"/>	
T4S	T4S	<input type="radio"/>	
T5N	T5N	<input type="radio"/>	
T5S	T5S	<input type="radio"/>	
T6N	T6N	<input type="radio"/>	
T6S	T6S	<input type="radio"/>	
T7N	T7N	<input type="radio"/>	
T7S	T7S	<input type="radio"/>	
T8N	T8N	<input type="radio"/>	
T8S	T8S	<input type="radio"/>	



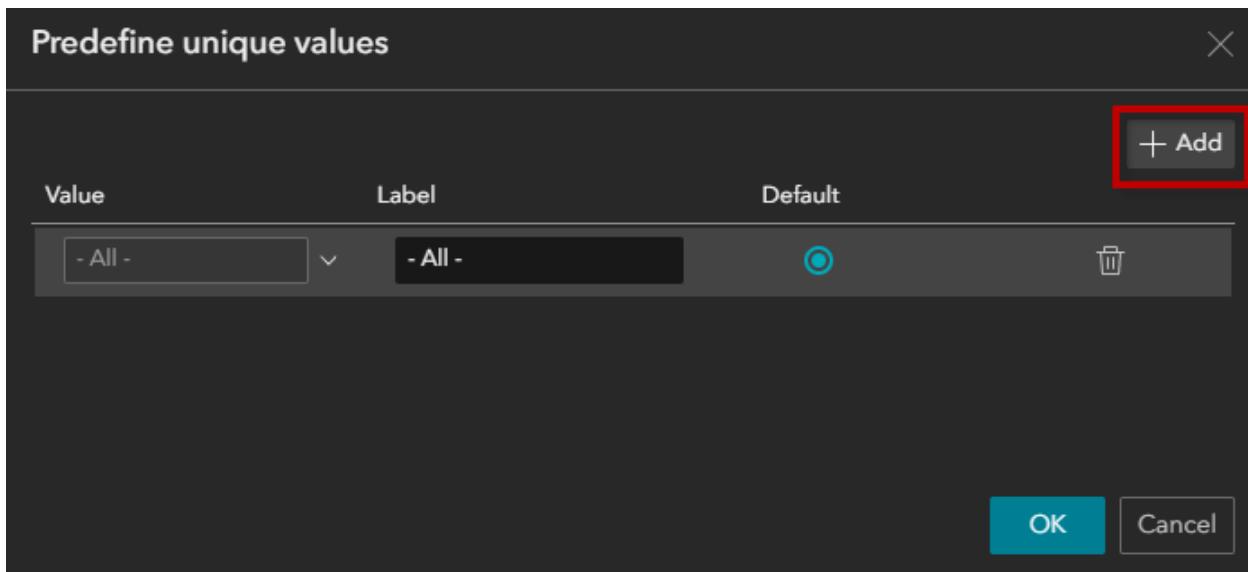
Range is Unique (predefined)



Add

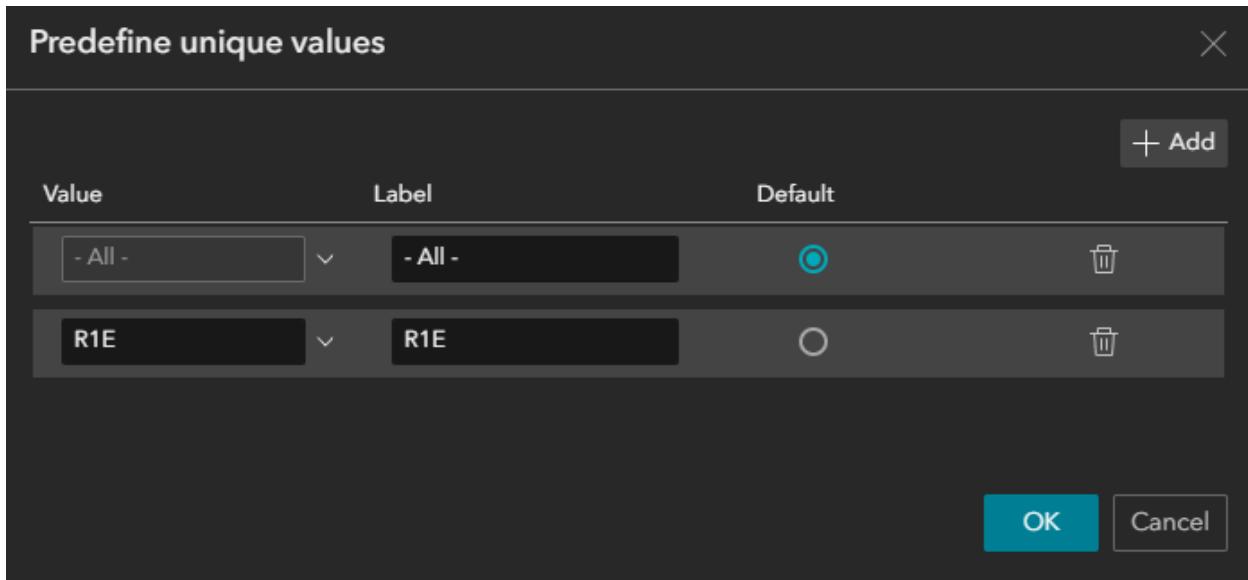


Add



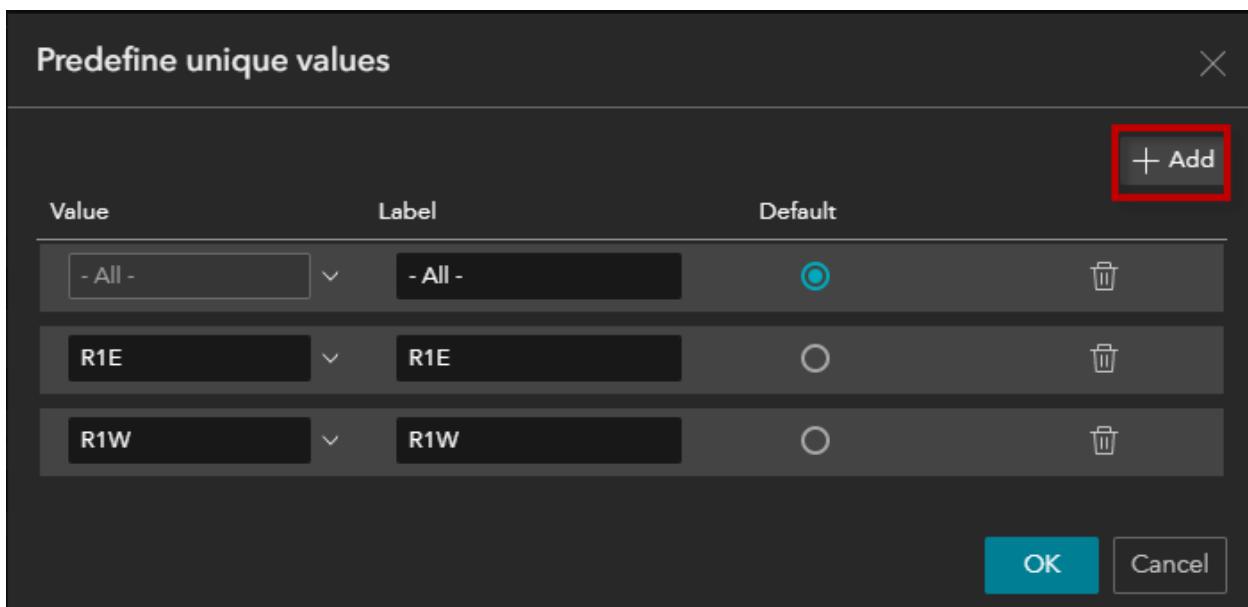
Add

Add Range Value = R1E



Add

Add Range Value = R1W



Keep adding the Predefined Range Values as shown.

Predefine unique values

+ Add

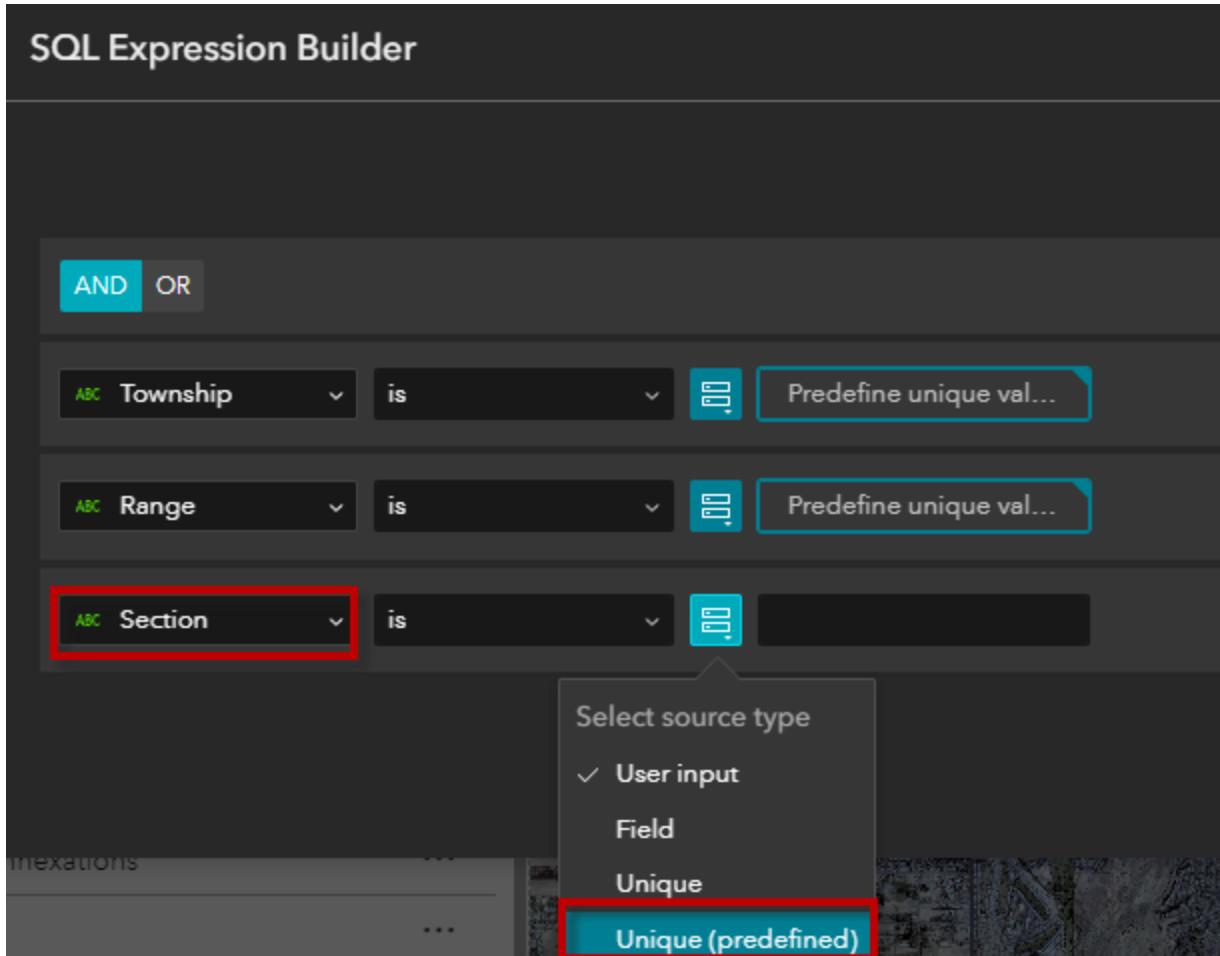
Value	Label	Default	
- All -	- All -	<input type="radio"/>	
R1E	R1E	<input checked="" type="radio"/>	Default
R1W	R1W	<input type="radio"/>	
R2E	R2E	<input type="radio"/>	
R2W	R2W	<input type="radio"/>	
R3E	R3E	<input type="radio"/>	
R3W	R3W	<input type="radio"/>	
R4E	R4E	<input type="radio"/>	
R4W	R4W	<input type="radio"/>	
R5E	R5E	<input type="radio"/>	
R5W	R5W	<input type="radio"/>	
R6E	R6E	<input type="radio"/>	
R6W	R6W	<input type="radio"/>	
R7E	R7E	<input type="radio"/>	
R7W	R7W	<input type="radio"/>	
R8E	R8E	<input type="radio"/>	
R8W	R8W	<input type="radio"/>	

R9E	▼	R9E	O	trash
R9W	▼	R9W	O	trash
R10E	▼	R10E	O	trash
R10W	▼	R10W	O	trash
R11E	▼	R11E	O	trash
R12E	▼	R12E	O	trash
R13E	▼	R13E	O	trash

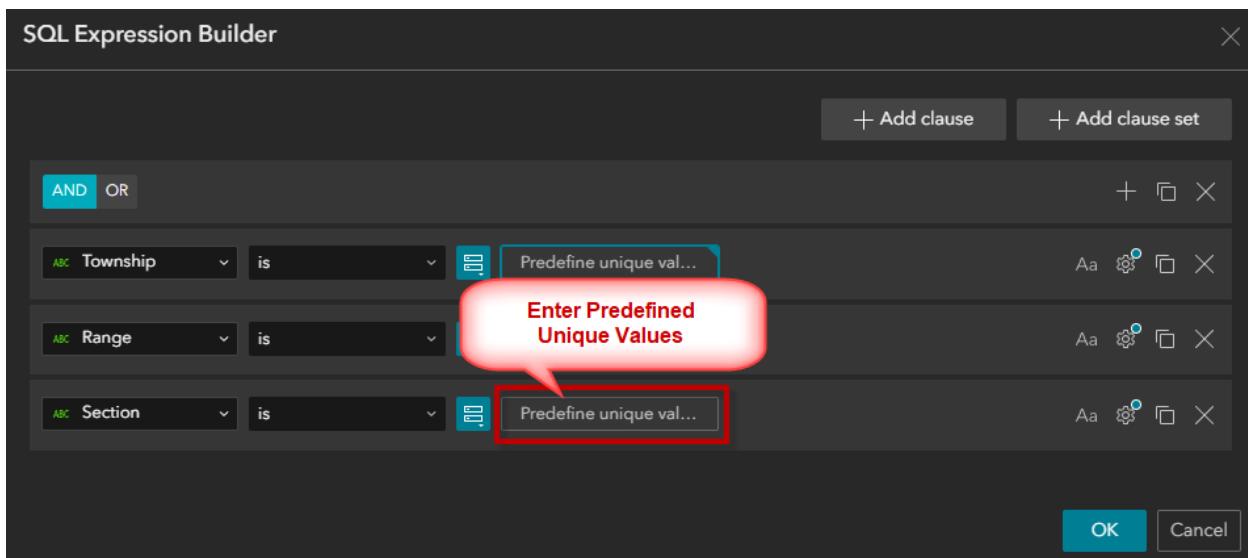
OK Cancel

OK

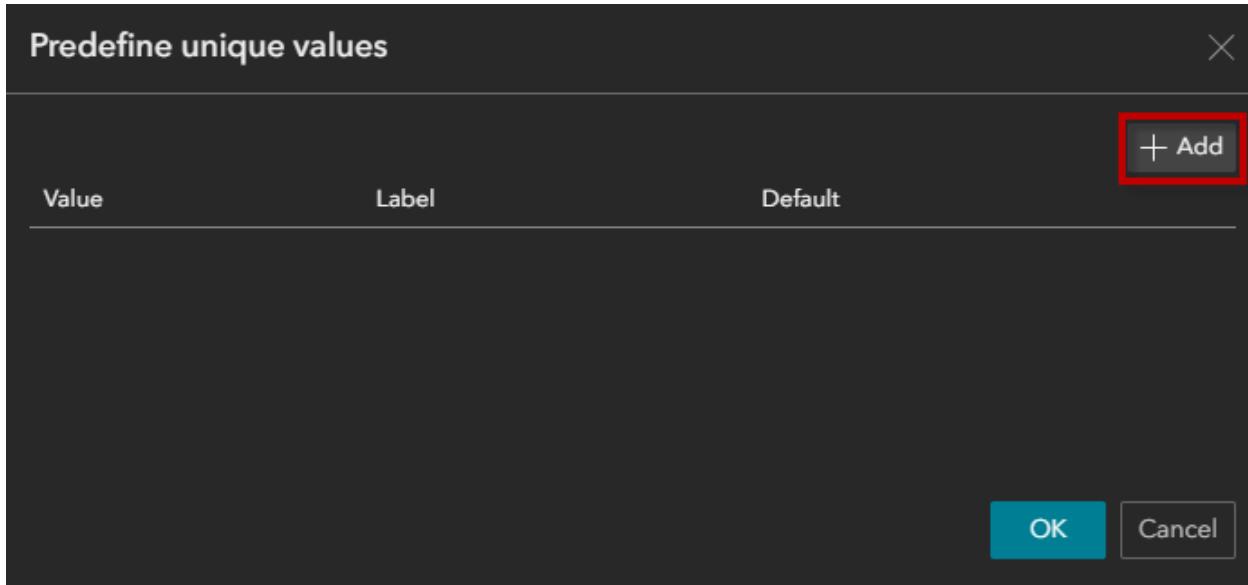
Section is Unique (predefined)



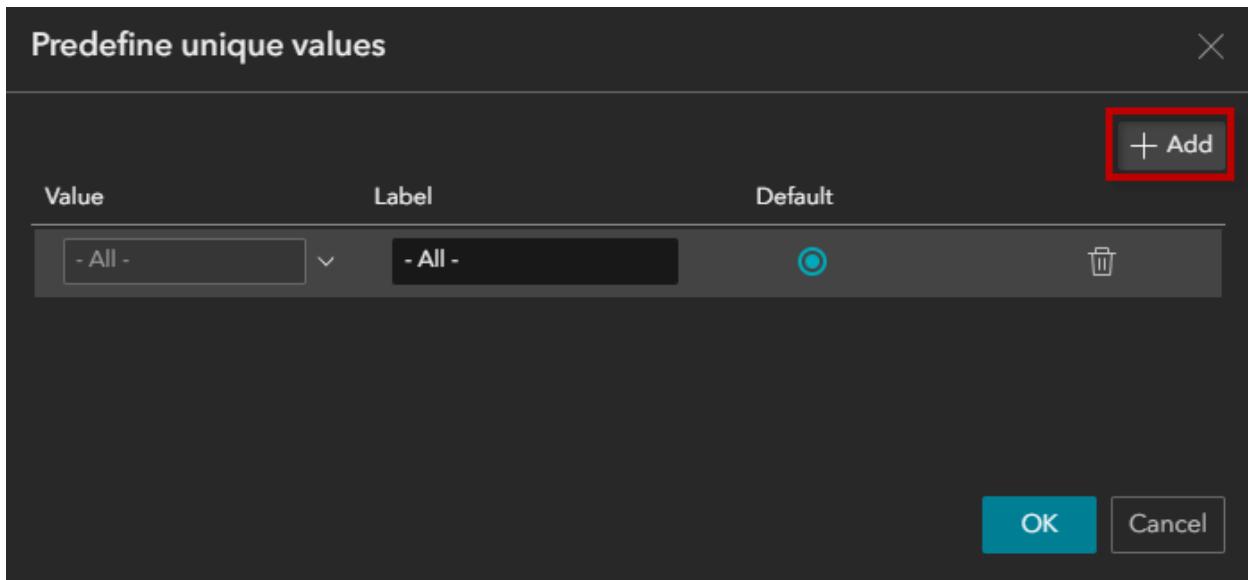
Enter Predefined Unique Values.



Add



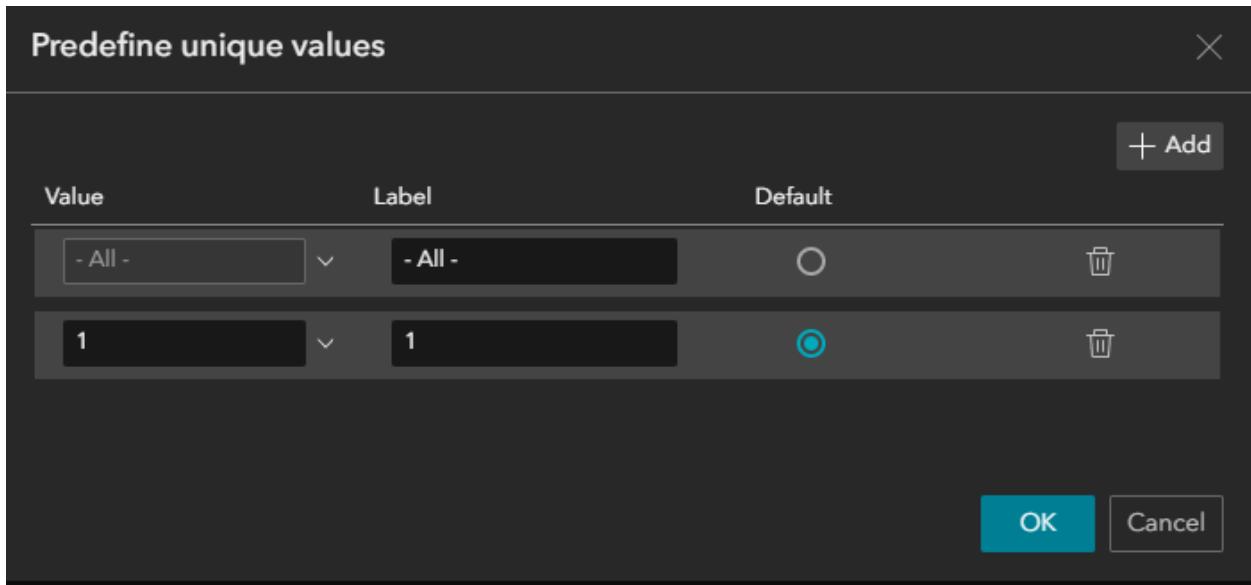
Add



Add

Enter the first Section Unique Value = 1

Make this the default.



Keep adding the Predefined Unique Values from 1 through 36.

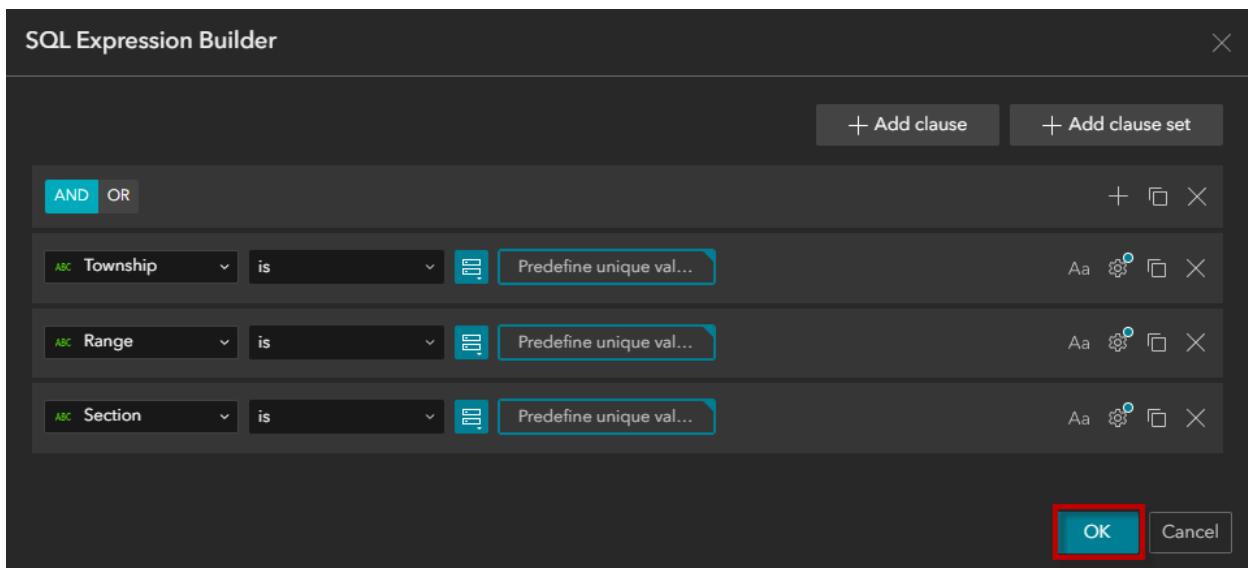
Predefine unique values

X

+ Add

Value	Label	Default	
- All -	- All -	<input type="radio"/>	
1	1	<input checked="" type="radio"/>	
2	2	<input type="radio"/>	
3	3	<input type="radio"/>	
4	4	<input type="radio"/>	
5	5	<input type="radio"/>	
6	6	<input type="radio"/>	
7	7	<input type="radio"/>	
8	8	<input type="radio"/>	
9	9	<input type="radio"/>	
10	10	<input type="radio"/>	
11	11	<input type="radio"/>	
12	12	<input type="radio"/>	
13	13	<input type="radio"/>	
14	14	<input type="radio"/>	
15	15	<input type="radio"/>	

16	16	○	☒
17	17	○	☒
18	18	○	☒
19	19	○	☒
20	20	○	☒
21	21	○	☒
22	22	○	☒
23	23	○	☒
24	24	○	☒
25	25	○	☒
26	26	○	☒
27	27	○	☒
28	28	○	☒
29	29	○	☒
30	30	○	☒
31	31	○	☒



Set query

Data

Section Label
Default

Label
Township, Range, Section

Icon Select icon

Attribute filter

Label
Attribute filter

Add SQL expressions to your query
SQL Expression Builder

```
((Township = 't1n') and (Range = 'r1e') and (Section = '1'))
```

Description
Please describe the filter.

Query ?

Content **Style** **Action**

Query item

+ New query

Parcel X

Subdivision X

ZIP Code X

City X

Township, Range, Section X

Arrangement style

Result style

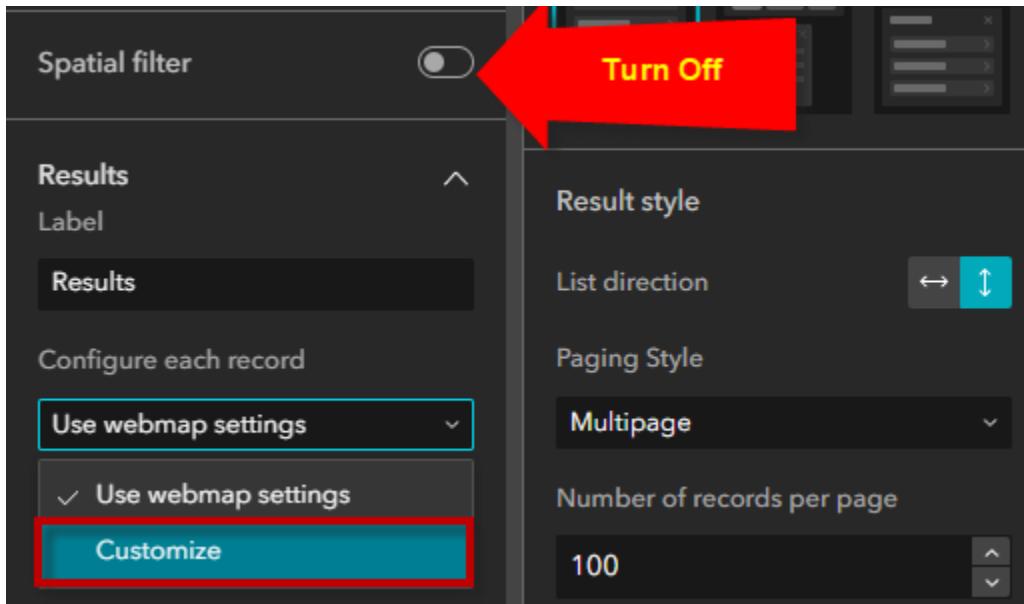
List direction ↔ ↑

Paging Style Multipage

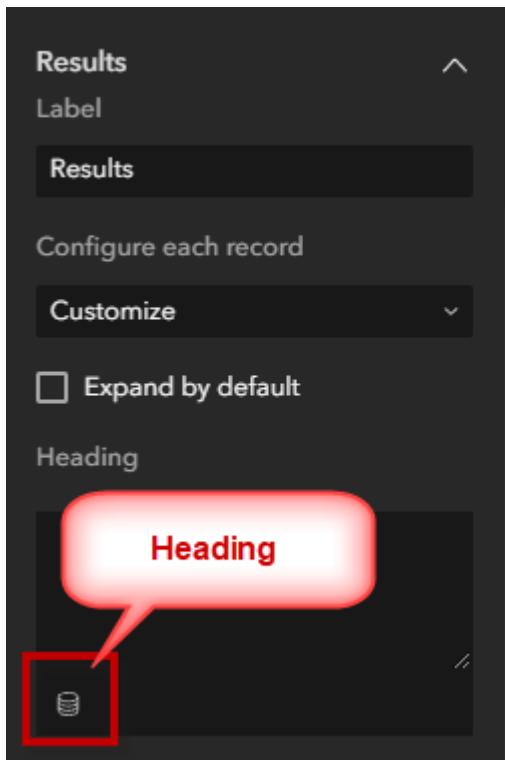
Number of records per page 100

Turn off the Spatial Filter

Configure each record = **Customize**



Define a Heading



Heading = {Township}, {Range}, Section {Section}

The screenshot shows the 'Results' configuration pane of the ArcGIS Feature Layer Properties dialog. On the left, a list of fields is visible, including OBJECTID, Township, Range, Section, QuarterSection, SHAPE_Length, and SHAPE_Area. The 'Section' field is currently selected. On the right, the 'Results' pane is displayed with the following settings:

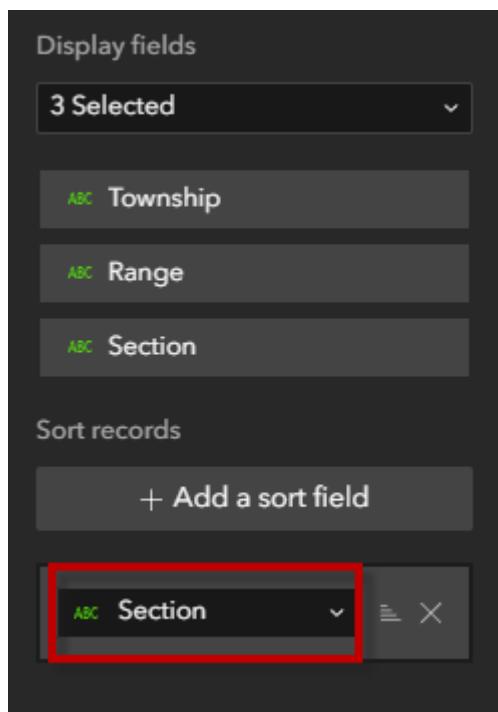
- Label:** Results
- Configure each record:** Customize
- Expand by default:** Unchecked
- Heading:** {Township}, {Range}, Section {Section}

Select 3 Display Fields

The screenshot shows the 'Display fields' configuration dialog. It displays a list of fields with checkboxes for selection. The following fields are checked:

- OBJECTID
- Township
- Range
- Section

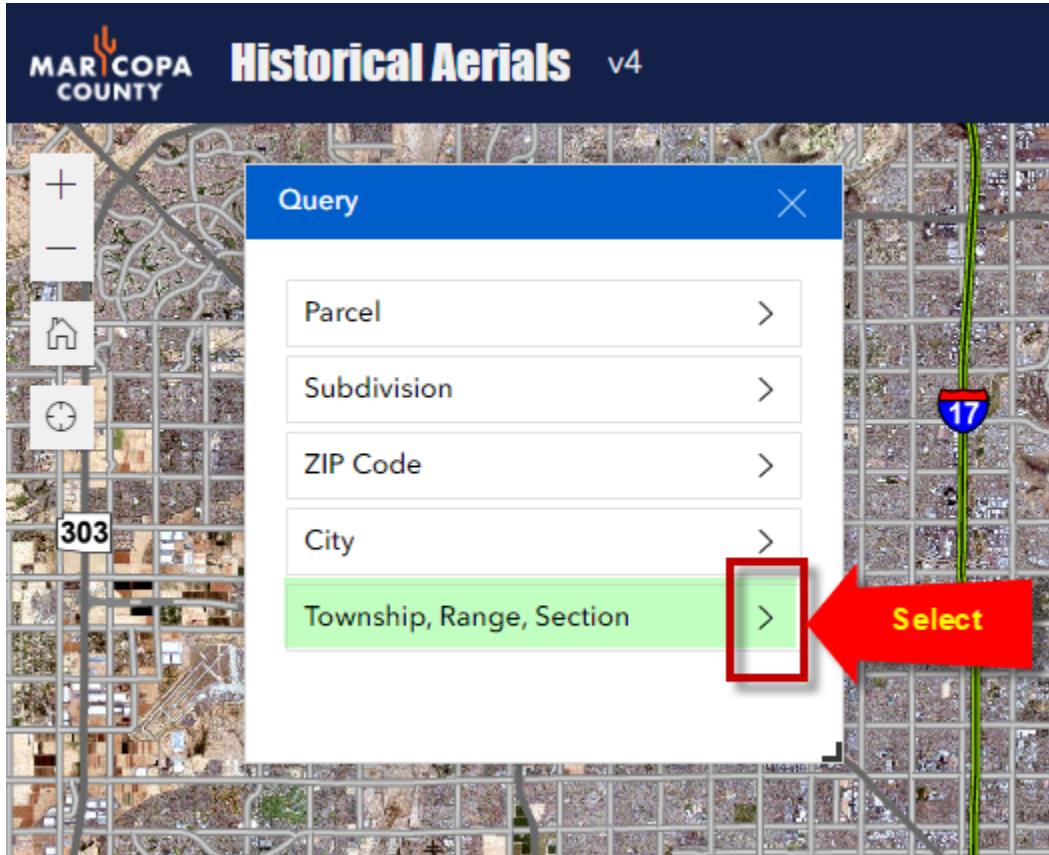
Add a Sort Field = Section



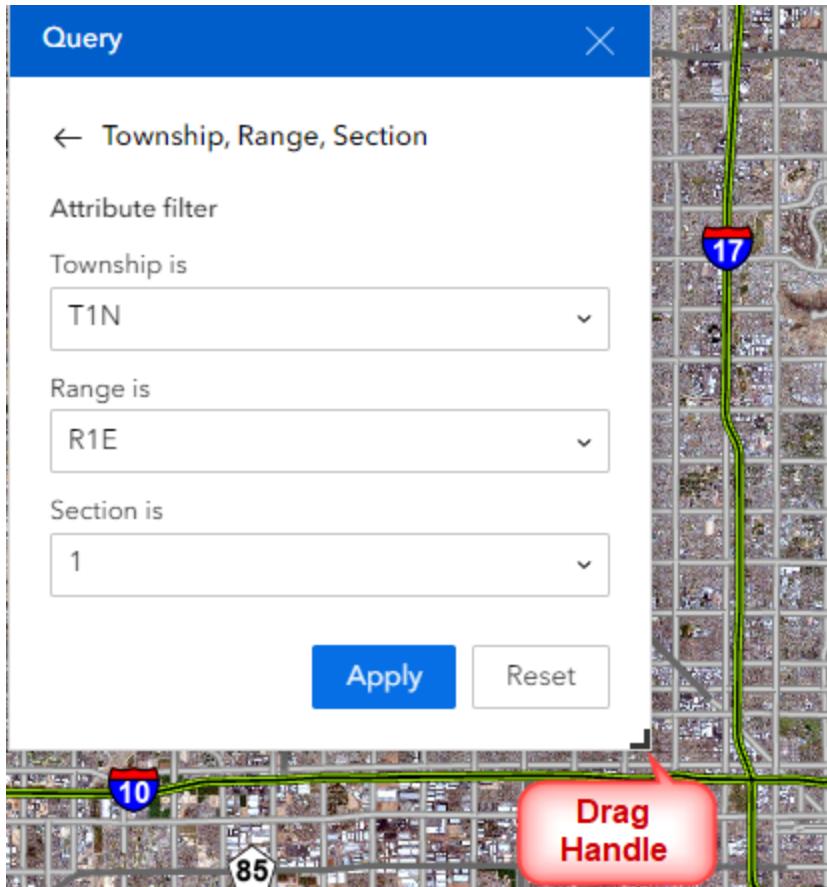
Save, Publish, View Published Item.

<https://localhost:3001/experience/3/>

Expand the Township, Range, Section Query



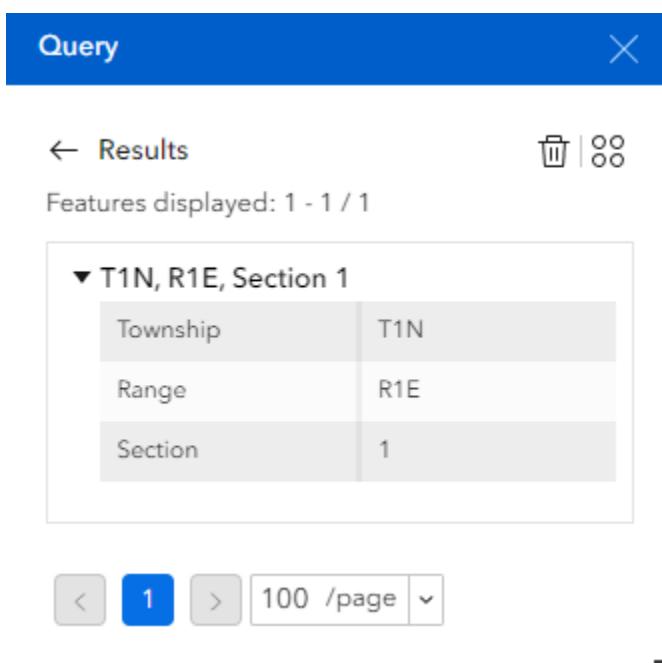
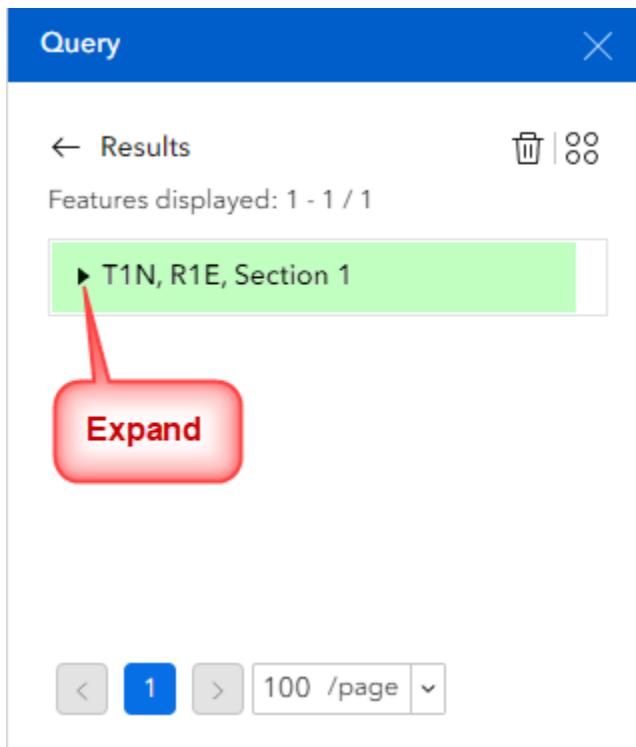
Resize the Query Widget by dragging the lower right corner.



Apply

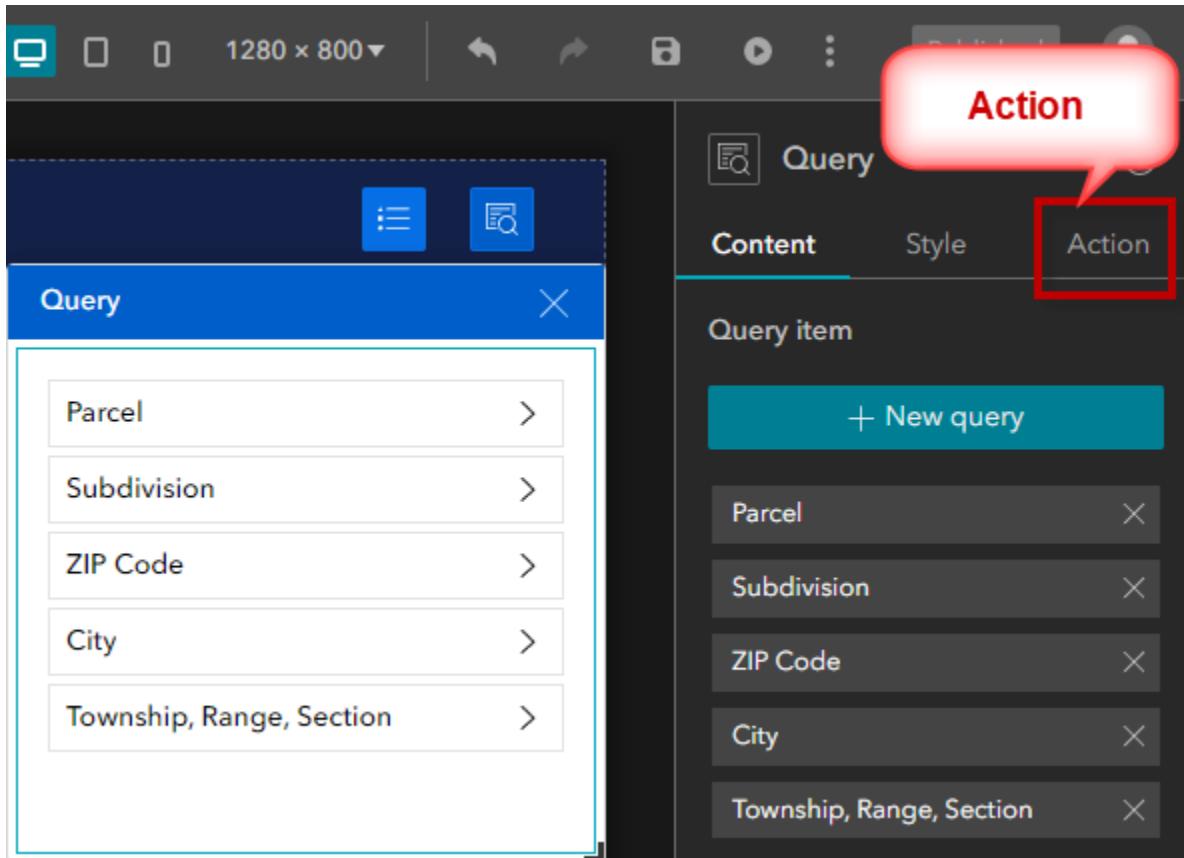
1 Result is found.

Expand the Result

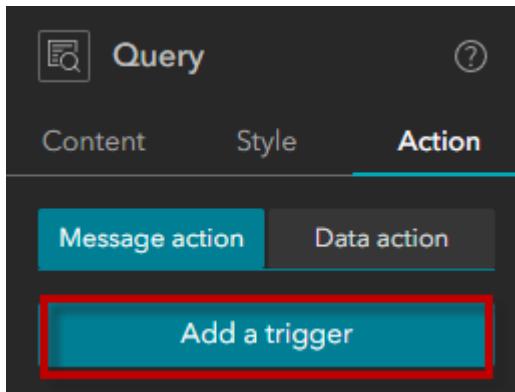


Add Actions to the Query Widget

Open the Action Tab of the Query Widget.



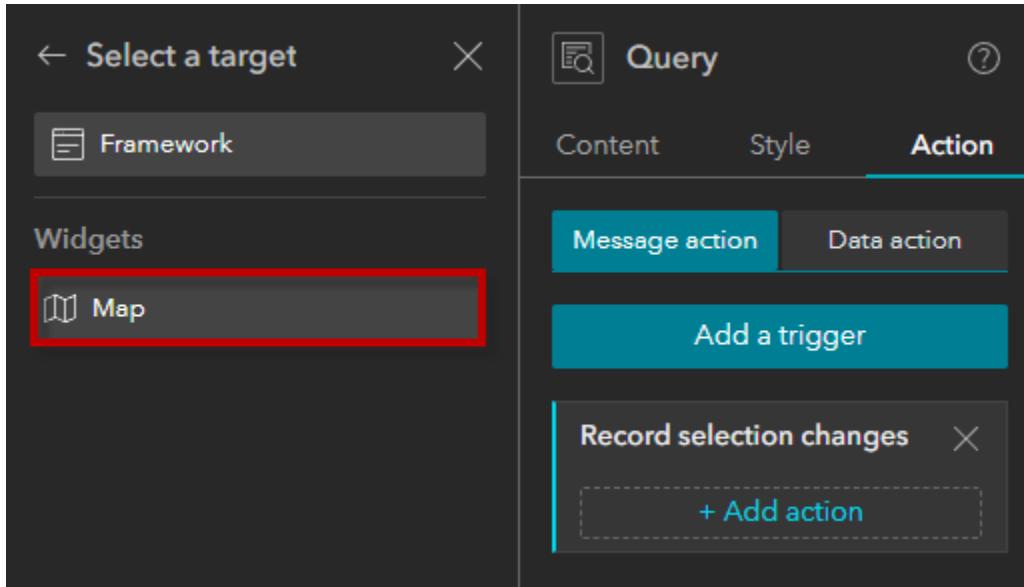
Add a Trigger



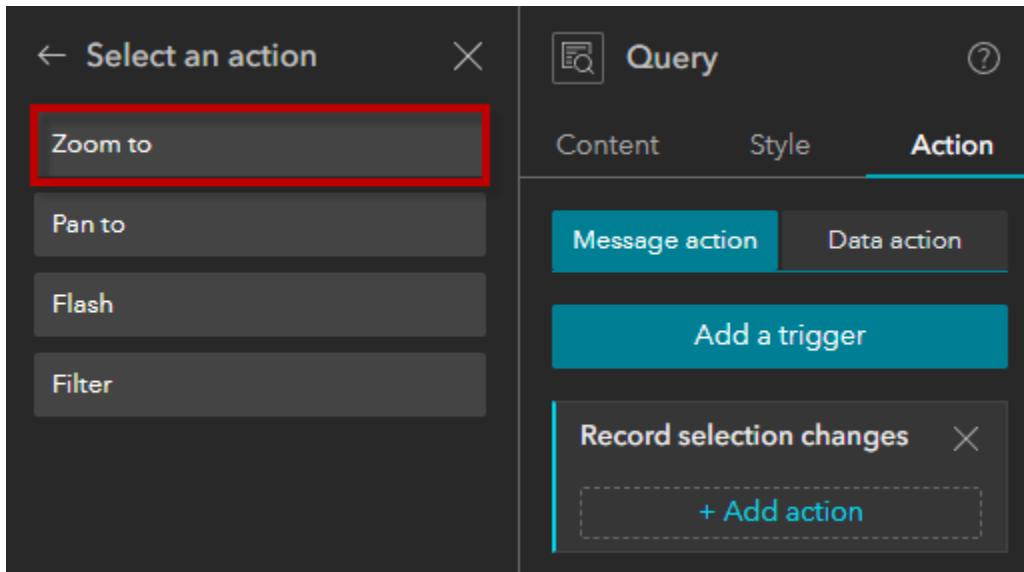
Record Selection Changes

A screenshot showing the 'Select a trigger' dialog on the left and the main 'Add a Trigger' interface on the right. The 'Select a trigger' dialog has a title 'Select a trigger' and a close button 'X'. Inside, there are two options: 'Record selection changes' (which is highlighted with a red border) and 'Records created'. The main interface on the right is identical to the one in the first screenshot, showing the 'Action' tab with its sub-tabs 'Message action' and 'Data action', and the 'Add a trigger' button at the bottom.

Map



Zoom To



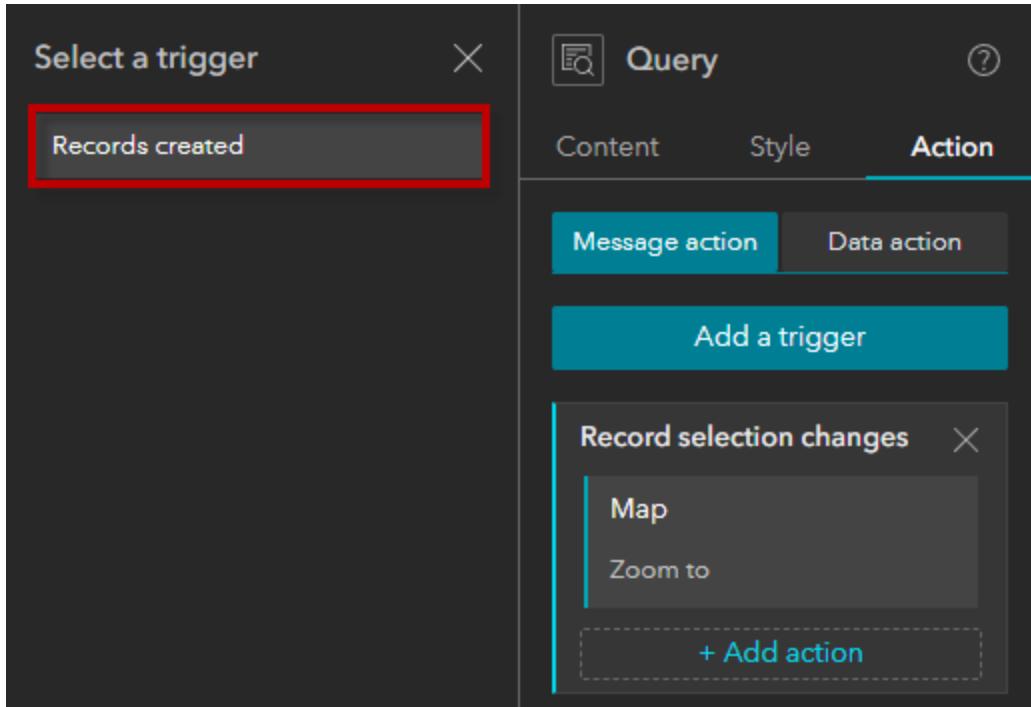
Add a Trigger

The screenshot shows the 'Action settings' interface for adding a trigger. On the left, there is a list of 'Trigger data' items, each with a checkbox and a dropdown menu set to '1 Selected'. The items are:

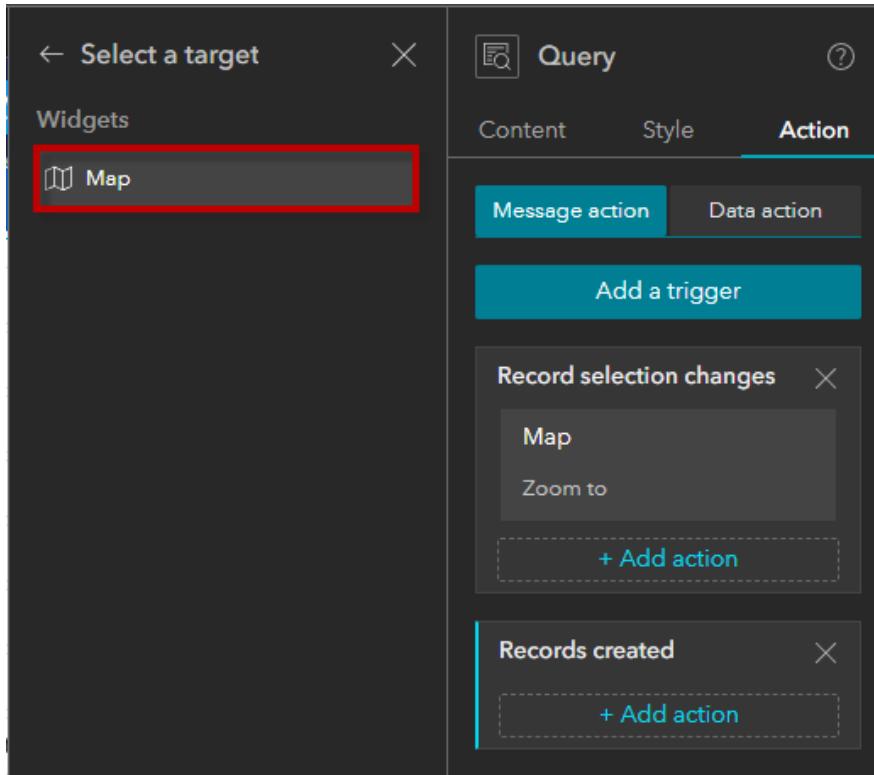
- City result output view
- Parcel result output vi...
- Subdivision result out...
- Township, Range, Sec...
- ZIP Code result output...

Below this list is a dashed box containing the text 'Select data'. On the right, the 'Query' interface is shown with the 'Action' tab selected. Under the 'Message action' tab, a button labeled 'Add a trigger' is highlighted with a red box. Below it, under 'Record selection changes', there is a 'Map' section with a 'Zoom to' button and a '+ Add action' button.

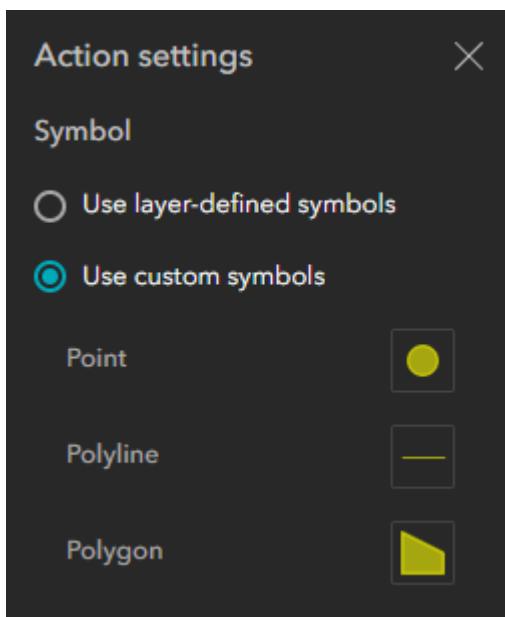
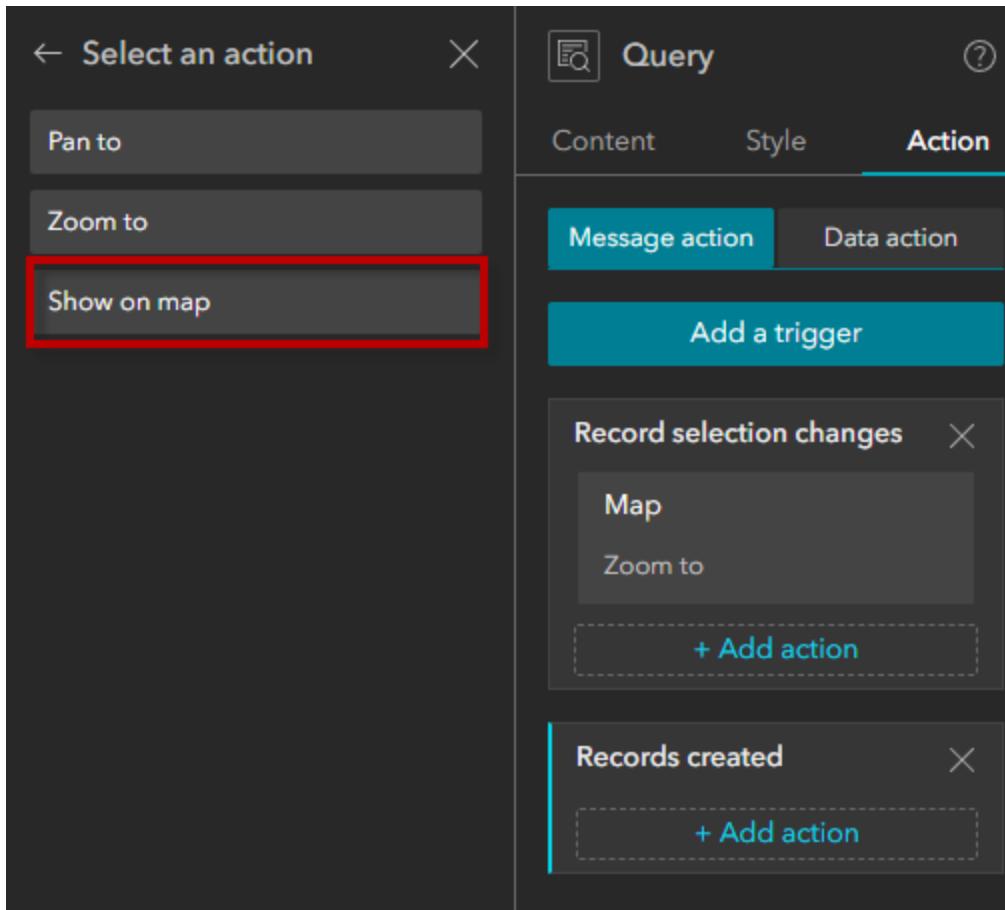
Records Created



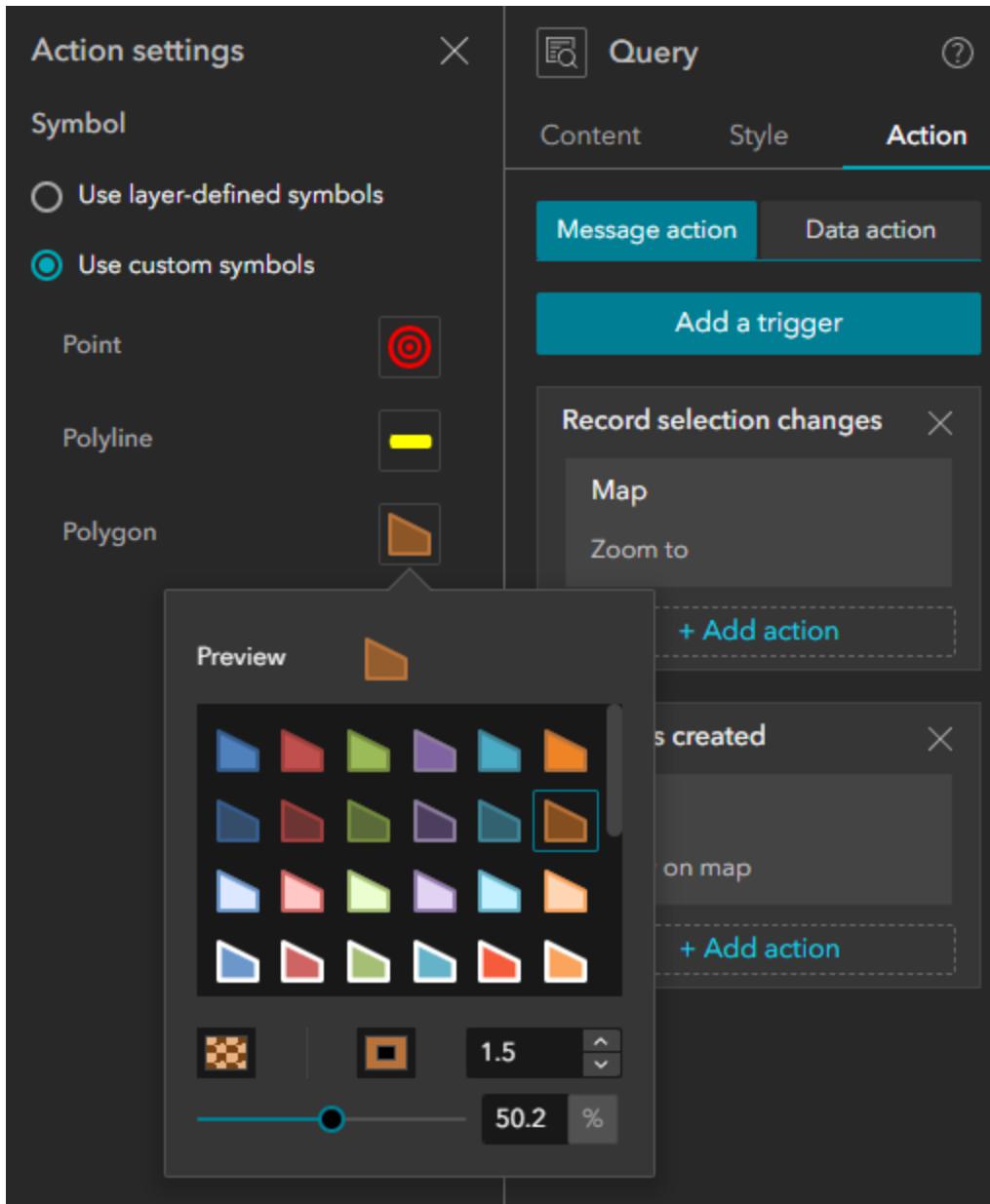
Map



Show on Map



Change the Symbols



The screenshot shows the ArcGIS Action settings interface. On the left, a sidebar titled "Action settings" contains a "Symbol" section with two options: "Use layer-defined symbols" (radio button) and "Use custom symbols" (radio button, selected). Below this are three categories: "Point" (with a red target icon), "Polyline" (with a yellow line icon), and "Polygon" (with an orange triangle icon).

The main area is titled "Query" and has tabs for "Content", "Style", and "Action" (selected). It includes a "Message action" tab and a "Data action" tab. A large blue button labeled "Add a trigger" is present.

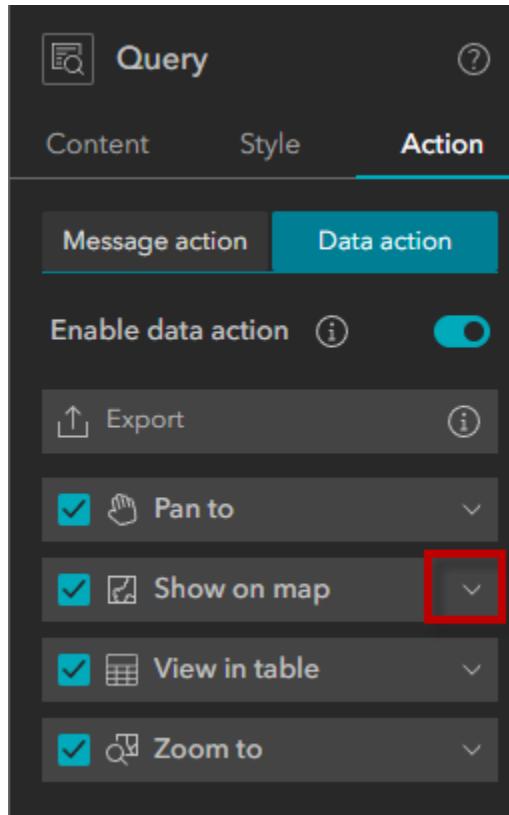
Two triggered actions are listed:

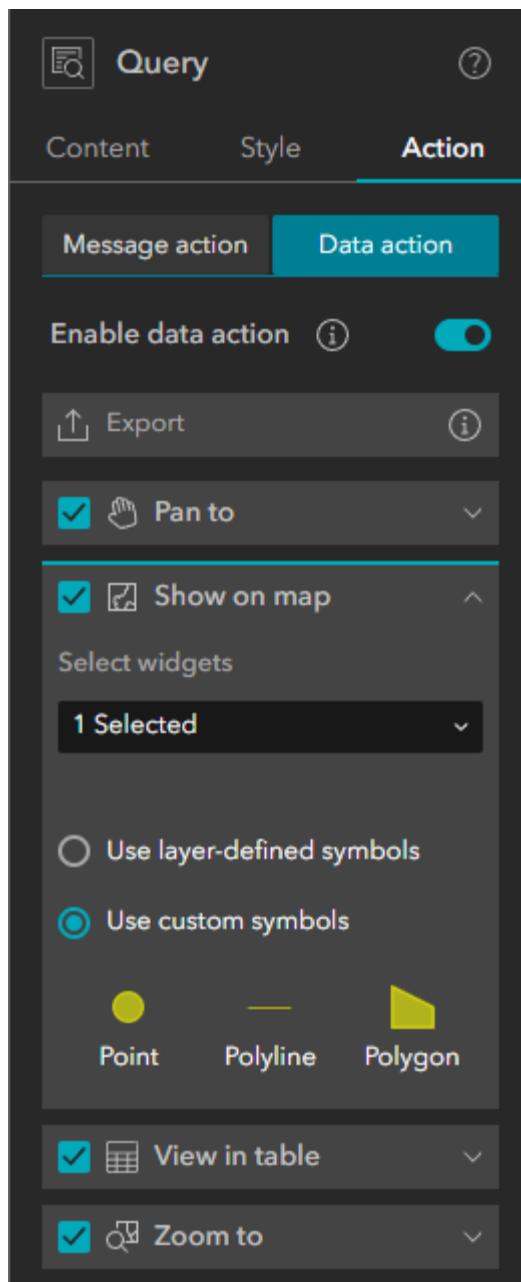
- Record selection changes**:
 - Map
 - Zoom toA red box highlights the "Zoom to" button.
- Records created**:
 - Map
 - Show on mapA red box highlights the "Show on map" button.

Each triggered action has a "+ Add action" button at the bottom.

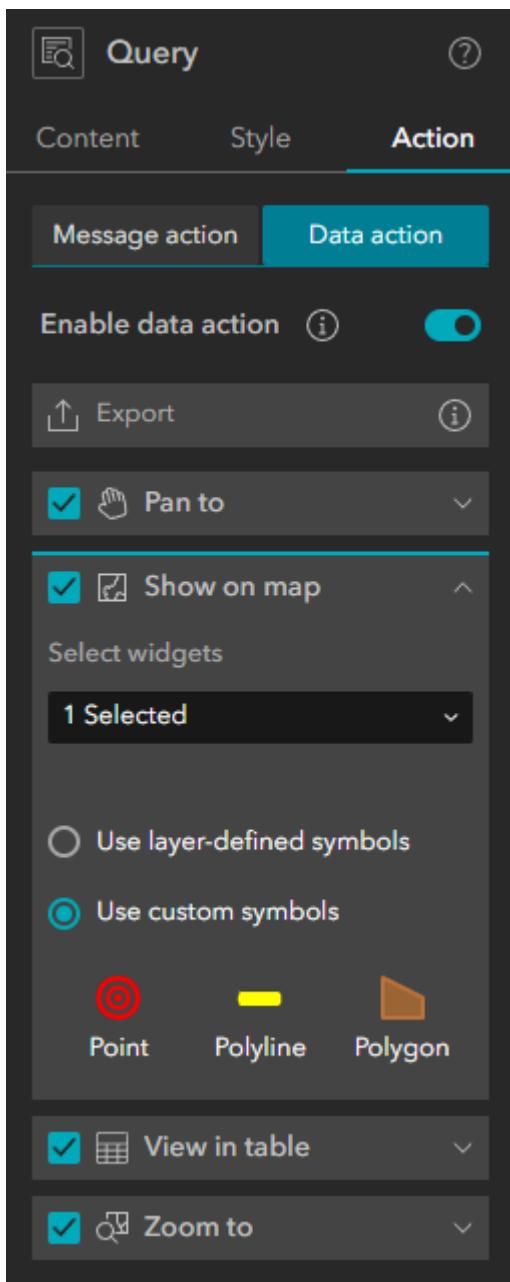
Query | Action | Data Action

Expand Show on Map





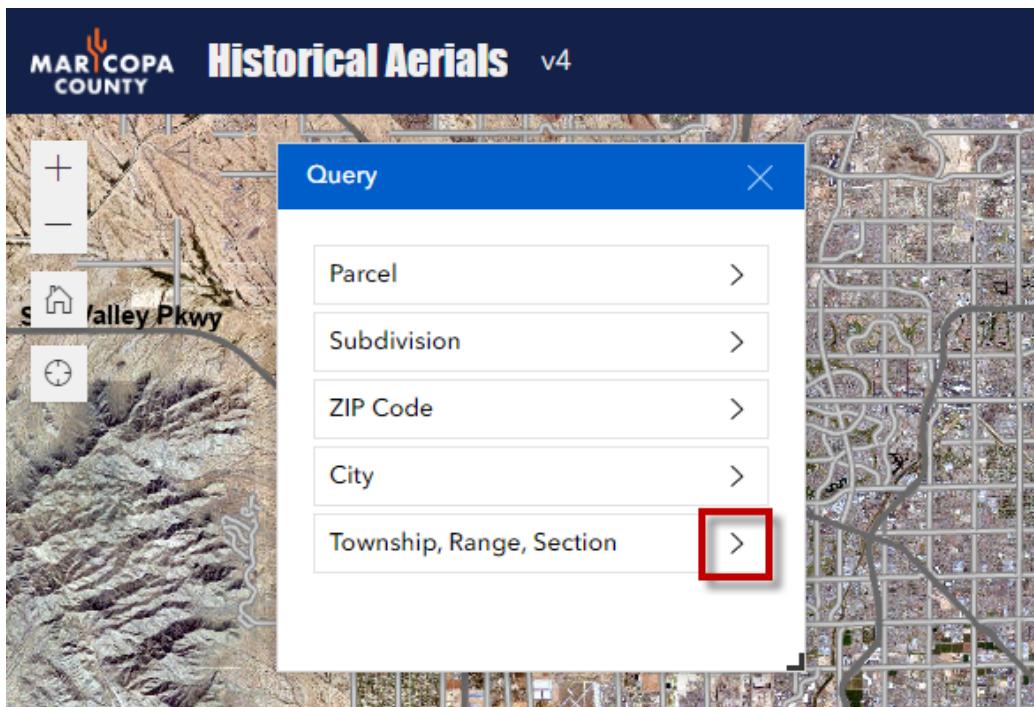
Change the Symbols



Save, Publish, View Published Item

<https://localhost:3001/experience/3/>

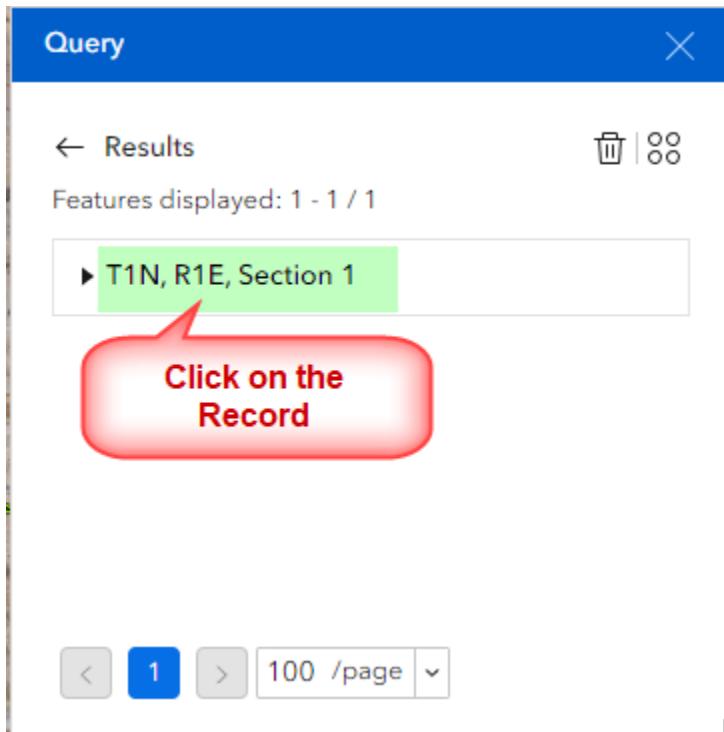
Expand the Township, Range, Section Query



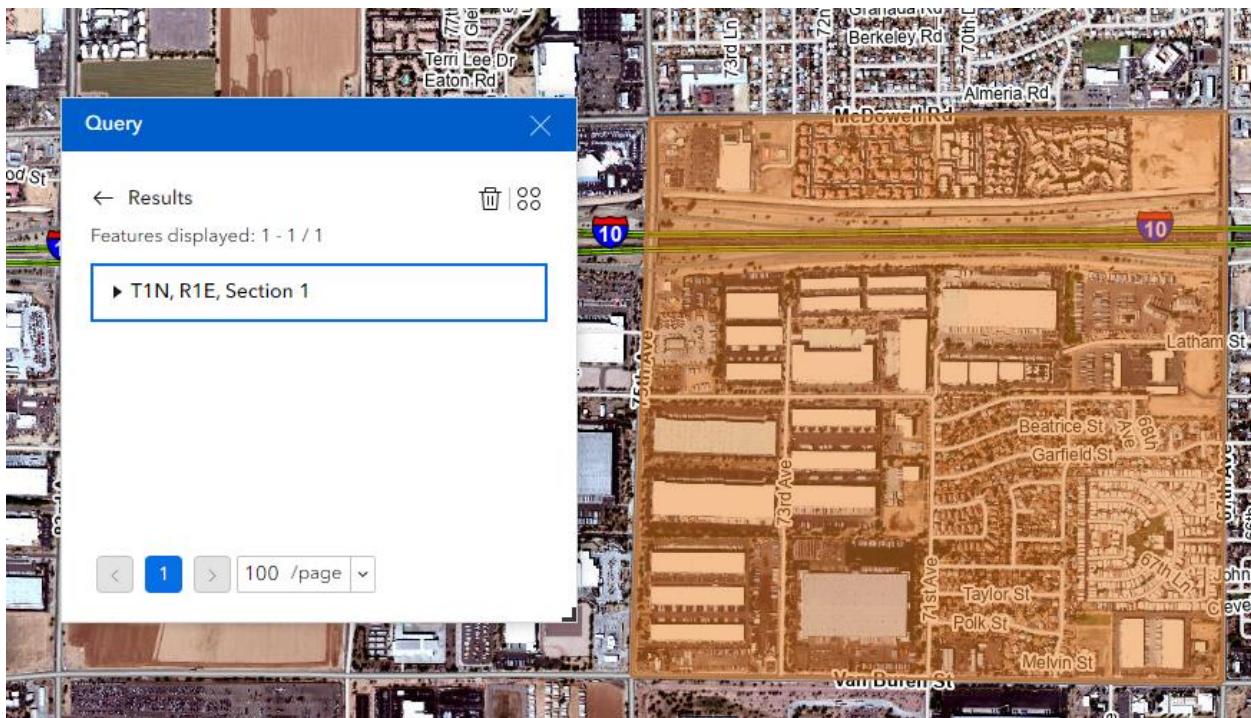
Apply

A screenshot of the expanded "Query" dialog box. The title bar says "Query". Below it, a back arrow points to "← Township, Range, Section". The main area contains three dropdown menus: "Township is" set to "T1N", "Range is" set to "R1E", and "Section is" set to "1". At the bottom are two buttons: a blue "Apply" button and a white "Reset" button.

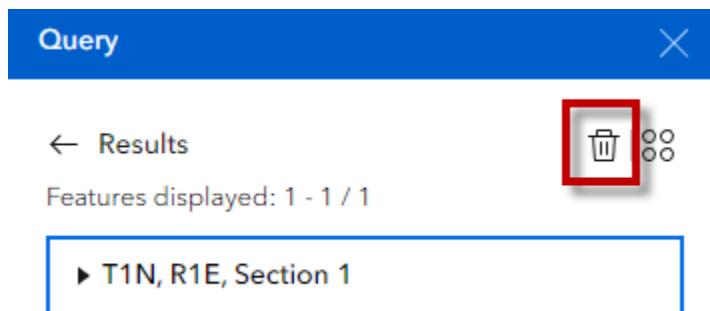
Click on the Record.



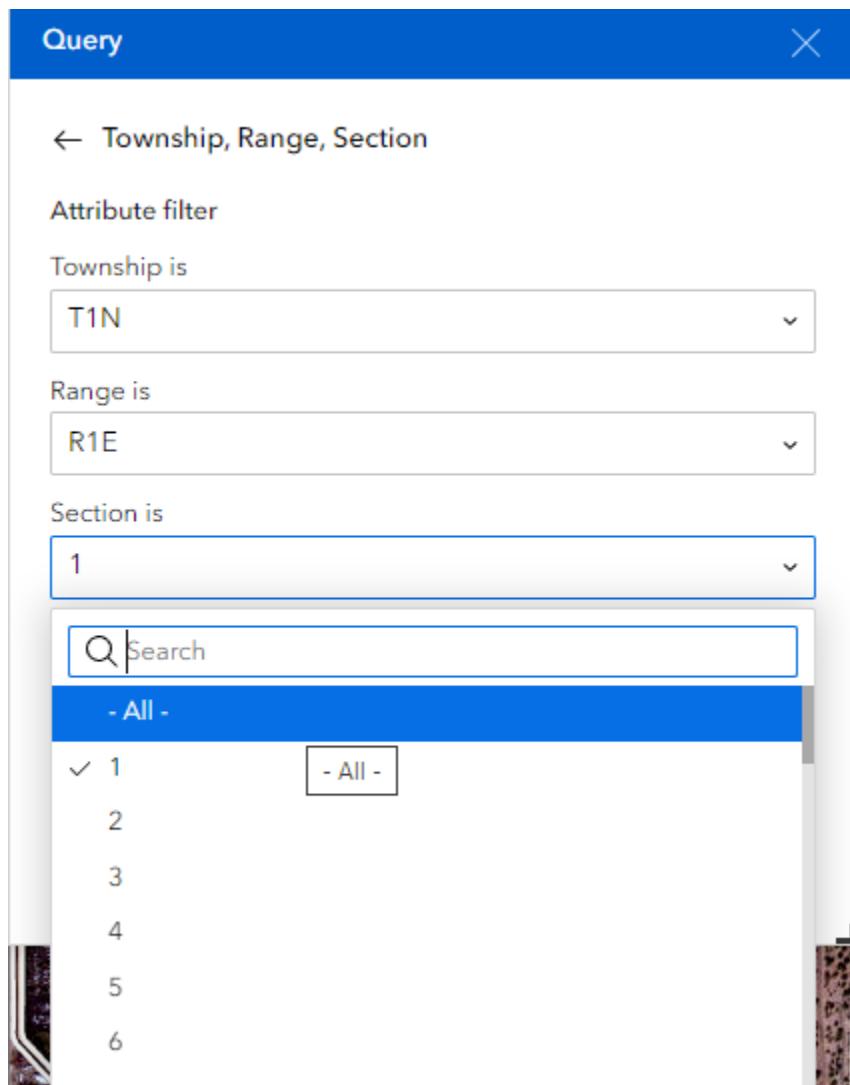
The Map will automatically zoom to this record.
The selected section will be highlighted in orange.



Clear the Results



Select Section = All



Apply

This will select the entire Township.

36 sections are found within this Township.

Notice how the records are sorted by Section Number.

The screenshot shows a GIS interface. On the left is a 'Query' results window titled 'Query'. It displays a red speech bubble containing the number '36'. Below it, a list of 36 sections is shown, each with a right-pointing arrow and the text 'T1N, R1E, Section [number]'. The list includes numbers 1 through 19, followed by 20 through 36. At the bottom of the list are navigation buttons for '1' (highlighted in blue), '100 /page', and a dropdown menu. To the right of the window is a satellite map of a rural area. A red speech bubble highlights the text 'Township T1N, R1E' located near the top center of the map. The map shows a grid of agricultural fields and roads, including Crystal Pkwy, 10, 88, 38, Van Buren St, Lower Buckeye Rd, Broadway Rd, 47th Ave, Avondale Blvd, Indian Springs Rd, and Dust Devil Rd. The map is centered on the township boundary.

Congratulations!!

You have made it through the half-way point.

It is time to take another break.

Before you go try the example Queries in the Historical Aerials User Guide:

https://daviddas2.github.io/HistoricalAerials/help/query_widget.htm

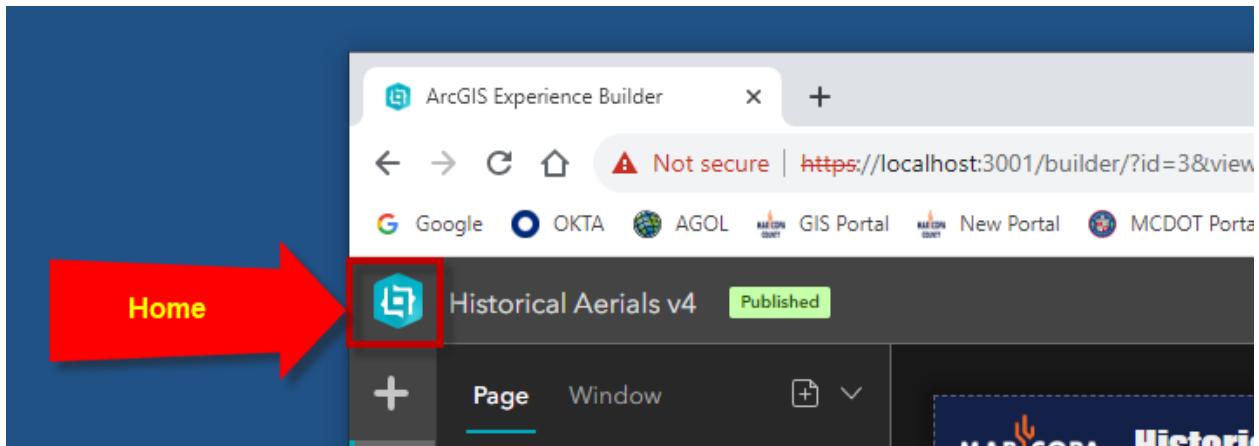
The screenshot shows a web application interface titled "Historical Aerial Photography Web Application User Guide". The left sidebar contains a navigation menu with various tools and widgets listed. The "Query Widget" option is highlighted. The main content area is titled "Query Widget" and contains a sub-section titled "Open the Query Widget." It features a map of Maricopa County, Arizona, with a search bar at the top. A red box highlights the "Query" button in the top right corner of the map interface. An arrow points from the text "You can zoom to any Parcel, Subdivision, ZIP Code, City or Township and run Spatial Queries." to the "Query" button. Below this, there is a section titled "The contents of Query Widget" with several links: "Using the Parcel Query", "Using the Subdivision Query", "Using the ZIP Code Query", "Using the City Query", and "Using the Township, Range, Section Query".

Check to see if everything is working properly.

Verify that you are getting the same results as shown in these examples.

Close this Experience Builder Session

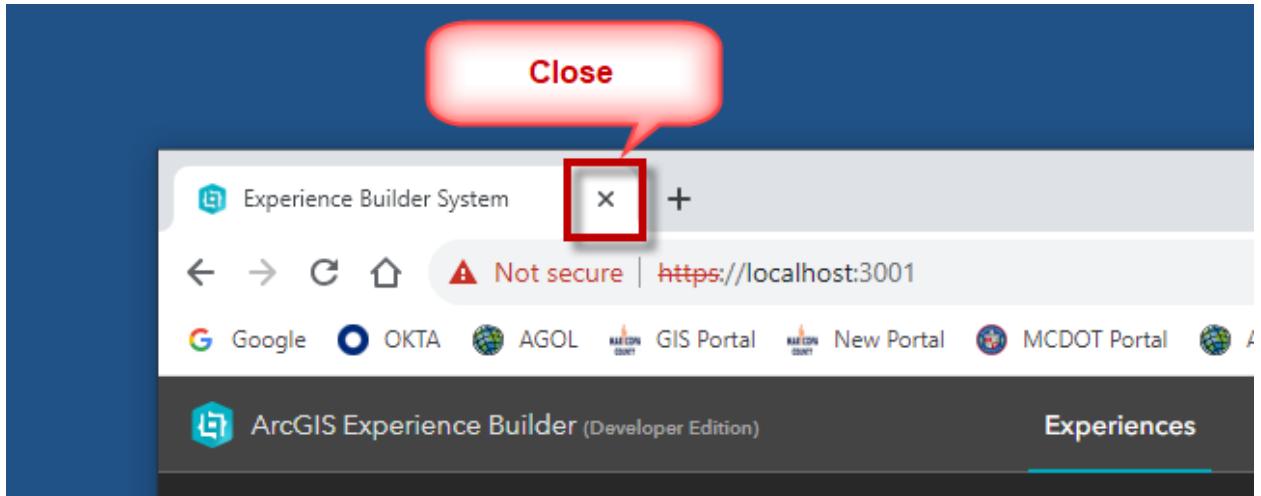
Go back to the Experience Builder Home Page.



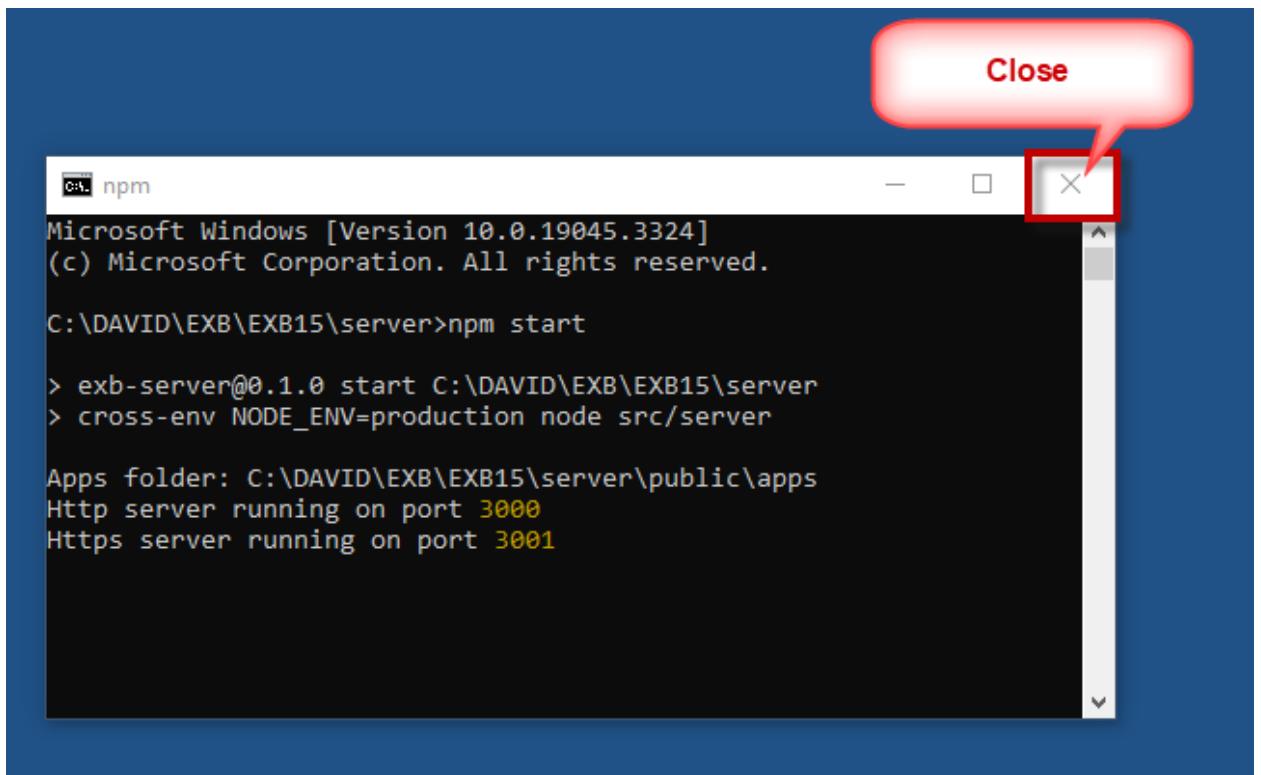
You have gone through 4 iterations of the Historical Aerials Web App.

Experience Name	Owner	Date
Historical Aerials v4	GIO_DasT	09/05/2023
Historical Aerials v1	GIO_DasT	09/05/2023
Historical Aerials v2	GIO_DasT	09/05/2023
Historical Aerials v3	GIO_DasT	09/05/2023

Close the Experience Builder System Tab



Close the Command Window running the npm server process.



This concludes **Part-2** of the Experience Builder Developer Edition 1.12 Tutorial.