

GIS 2: basic introduction with import

By Vanessa Arias Casillas (Graduate Fellow)

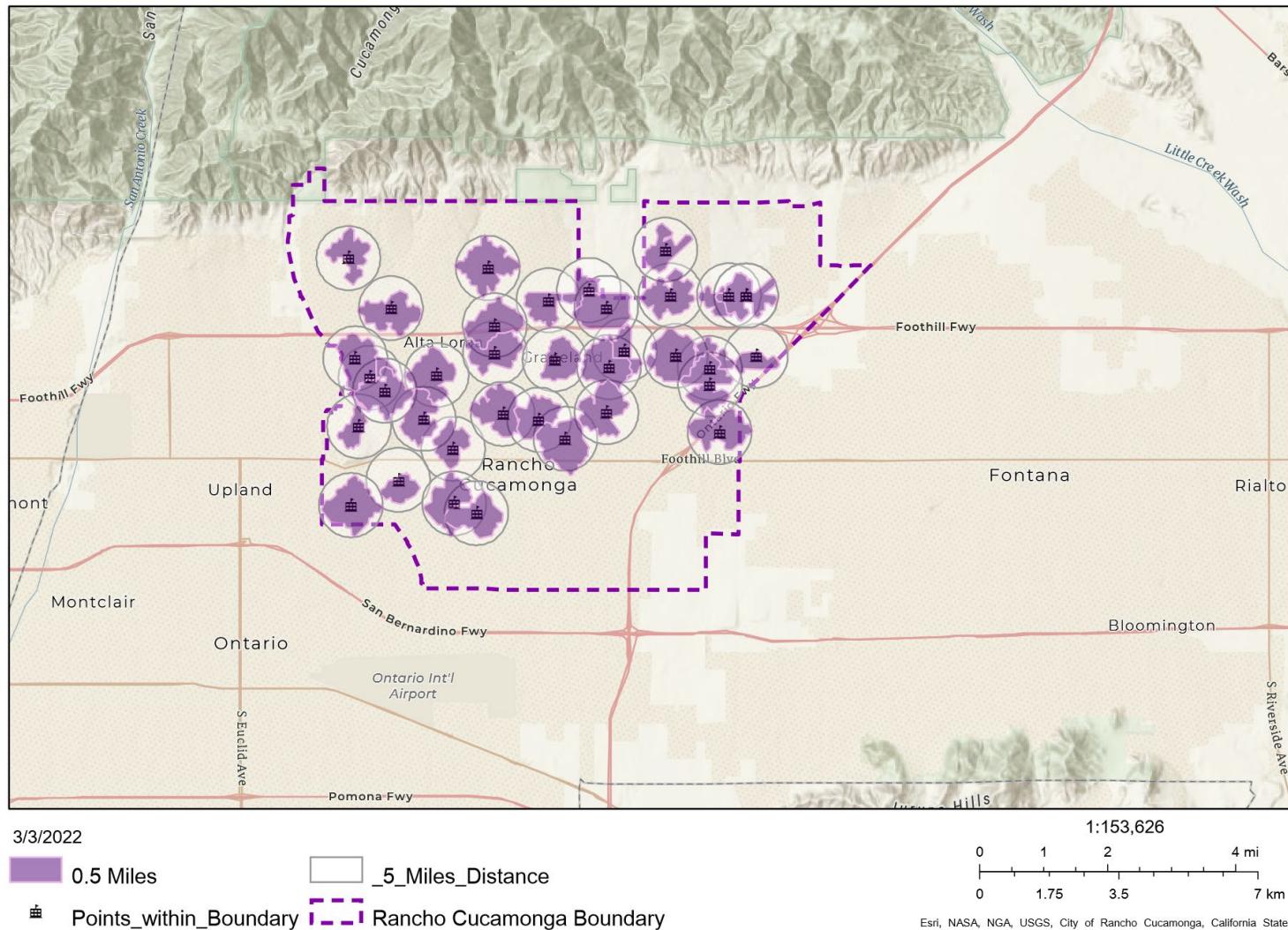
Agenda

- Continuing adding to map and looking at features
 - What makes a good map?
 - Visually
 - Contents
 - Importing your own data
 - Cleaning data before import
 - Having the right information for import
 - Exporting into another ESRI program: Story Maps

Goal

- Able to make changes to your maps with purpose
- Import your own data correctly
- Setting up your data to be imported
- Create a Story Map to present your data

QCLworkshop Map

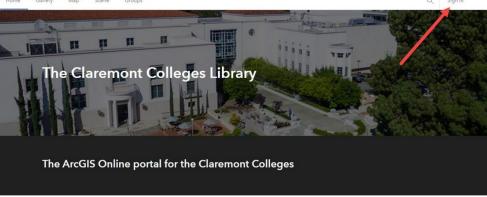


CMC – ArcGIS

Get an ArcGIS Account

You can access ArcGIS Online directly with your Single Sign-On (SSO) credentials when you click "Sign In" from the [Claremont Colleges Library ArcGIS Portal](#).

[Access the Claremont ArcGIS Portal](#)



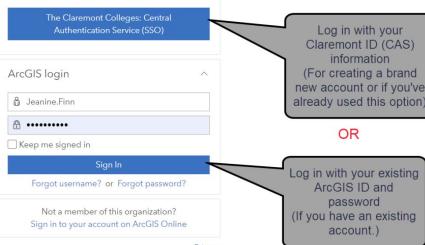
The ArcGIS Online portal for the Claremont Colleges

The Claremont Colleges Library Portal, sign in link is in the top right

If you have existing credentials from ArcGIS Online, you can continue to log in with those.

Sign in to The Claremont Colleges Library 

Two ways to log in to ArcGIS



ArcGIS login

Jeanine.Finn

Keep me signed in

Sign In

Forgot username? or Forgot password?

Not a member of this organization?
Sign in to your account on ArcGIS Online

Privacy

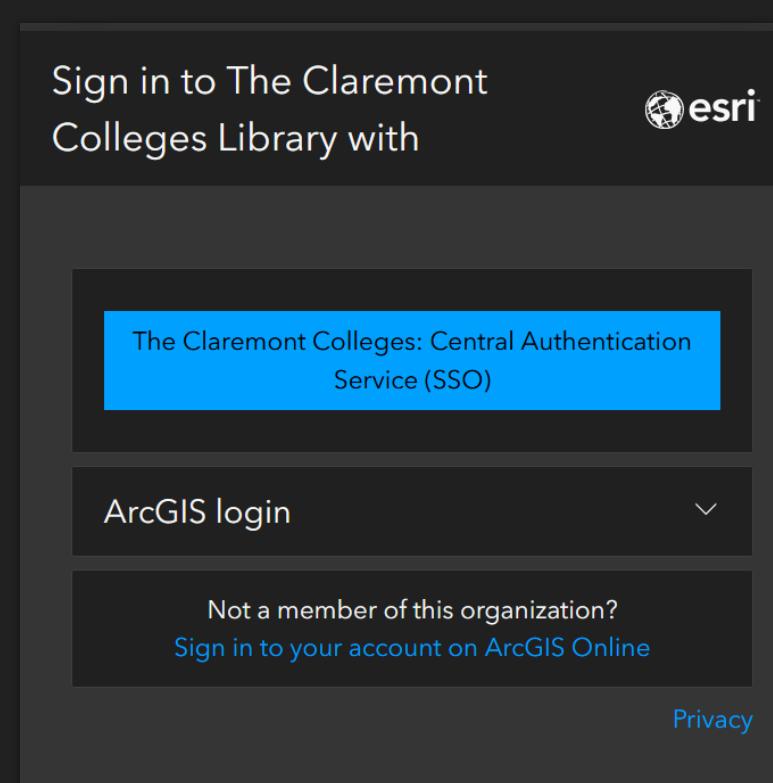
Log in with your Claremont ID (CAS) information
(For creating a brand new account or if you've already used this option)

OR

Log in with your existing ArcGIS ID and password
(If you have an existing account.)

ArcGIS sign on screen. Two ways to log in to ArcGIS: 1. Login with your Claremont ID (CAS) information (for creating a brand new account or if you've already used this option). OR 2. Log in with your existing ArcGIS ID and password (if you have an existing account).

Organization and login



The Claremont Colleges Library

Home Gallery Map Scene Groups Content Organization [Overview](#) [Members](#)

The Claremont Colleges Library

Subscription ID: 9377927143

System health: ✓ All systems operational

Newest members

View all members

CP Chardy Paige

MV Mirek Vanis

NS Nathan Shankar

JB Jon Burkart

Administrative contacts

JF Jeanine Finn

Open Data groups

View all

B Basemaps 2019
Contributors: 1 Items: 32

HMC Clinic
Contributors: 9 Items: 0

Latest content

Rincon Crater

by claremontcolleges
Created: Dec 31, 2021
Updated: Dec 31, 2021
View Count: 9

RinconCrater

by claremontcolleges
Created: Dec 31, 2021
Updated: Dec 31, 2021
View Count: 5

2022 Dia Mundial de la Tierra Con...

by CWeisman21@cmc.edu_clare...
Created: Dec 21, 2021
Updated: Jan 4, 2022
View Count: 3

View all content

Trust Center | Contact Esri | Report Abuse | Contact Us

Home view

Groups – add yourself

The screenshot shows a user interface for managing groups. At the top, there is a navigation bar with links for Home, Gallery, Map, Scene, Groups (which is underlined, indicating it's the active page), Content, and Organization. To the right of the navigation bar are icons for search, notifications, and a user profile. The user profile shows the name "Vanessa Casillas" and the email "VanCasillas@cmc.edu_cl...". Below the navigation bar is a blue header bar with the word "Groups" on the left, and three tabs on the right: "My Groups", "Featured Groups", and "My Organization's Groups". Underneath the header is a search bar with a placeholder "Search My Groups" and a "Create group" button. On the left side, there is a "Filters" section with a toggle switch for "Only show groups with new membership requests". Below the filters is a dropdown menu for "Owner" with options: "VanCasillas@cmc.edu_claremont", "Another organization member", and "Someone outside the organization". The main content area displays a single group entry: "QCL Workshop" (owner: VanCasillas@cmc.edu_claremont, created and last updated on Mar 3, 2022, viewable by Everyone (public)). There is also a "Delete group" link next to the group name.

Home Gallery Map Scene Groups Content Organization

Vanessa Casillas
VanCasillas@cmc.edu_cl...

Groups My Groups Featured Groups My Organization's Groups

+ Create group Search My Groups Title Filter

Filters

Only show groups with new membership requests

Owner

VanCasillas@cmc.edu_claremont
Another organization member
Someone outside the organization

1 - 1 of 1

QCL Workshop
Owner: VanCasillas@cmc.edu_claremont
Created: Mar 3, 2022 Last updated: Mar 3, 2022 Viewable by: Everyone (public)

Workshop

Delete group

Classic ArcGIS

Home ▾ My Map

Details Add Basemap Analysis

About Content Legend

Make your own map

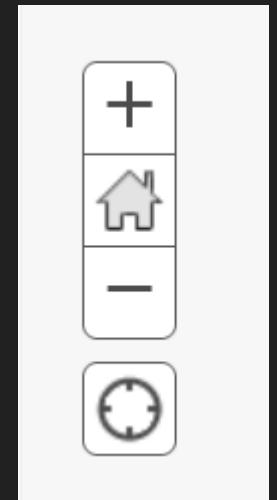
It's easy to make your own map. Just follow these steps:

1. Choose an area.
Pan and zoom the map to an area or search by its name or address.
2. Decide what to show.
Choose a Basemap then Add layers on top of it.
3. Add more to your map.
Add notes to draw features on the map.
4. Save and share your map.
Give your map a name and description then share it with other people.

Save Share Print Directions Measure Bookmarks Find address or place

0 2 4 km

County of Los Angeles, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA | County of Los Angeles, Esri, HERE, Garmin, SafeGraph, METI/NASA, U...



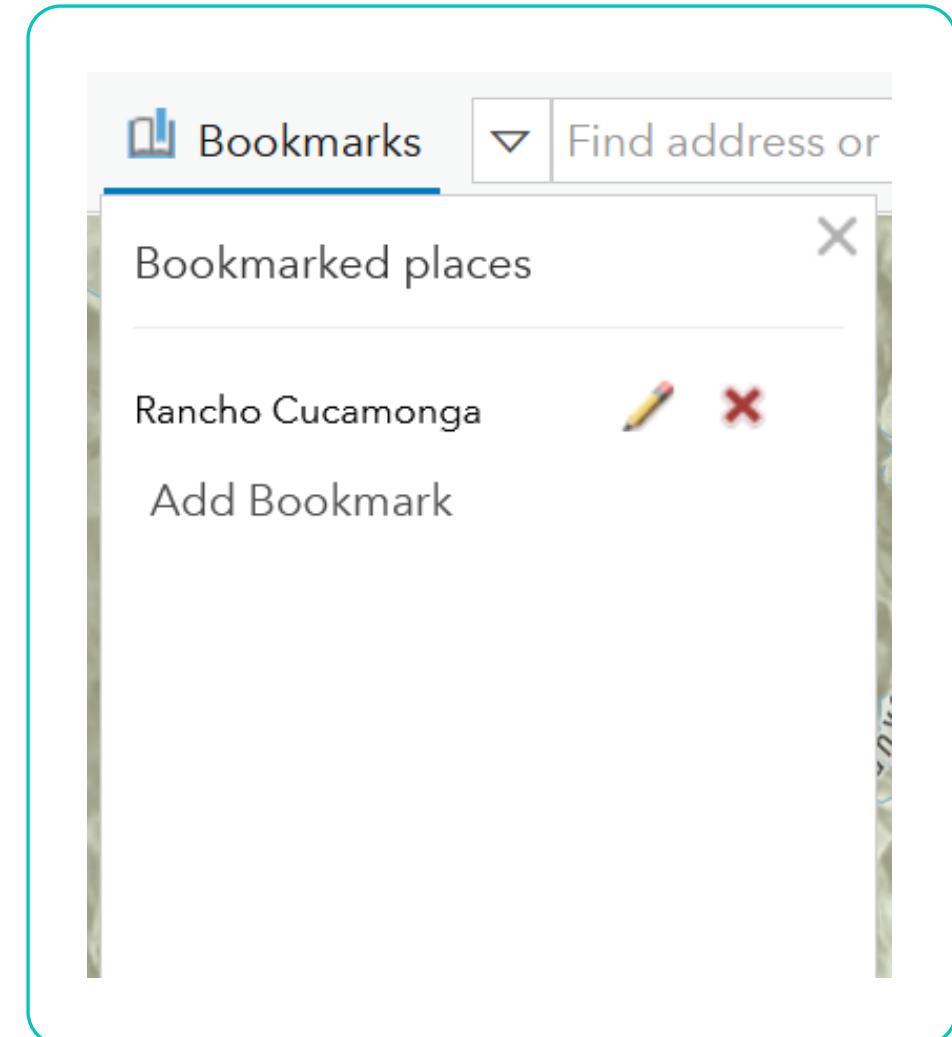
What makes a good map?

- Geographic Bounds
- Data Elements
- Symbolization
- Labels
- Legend
- Map Elements
- Metadata
- Map Layout
- Locator Map
- Peer Review



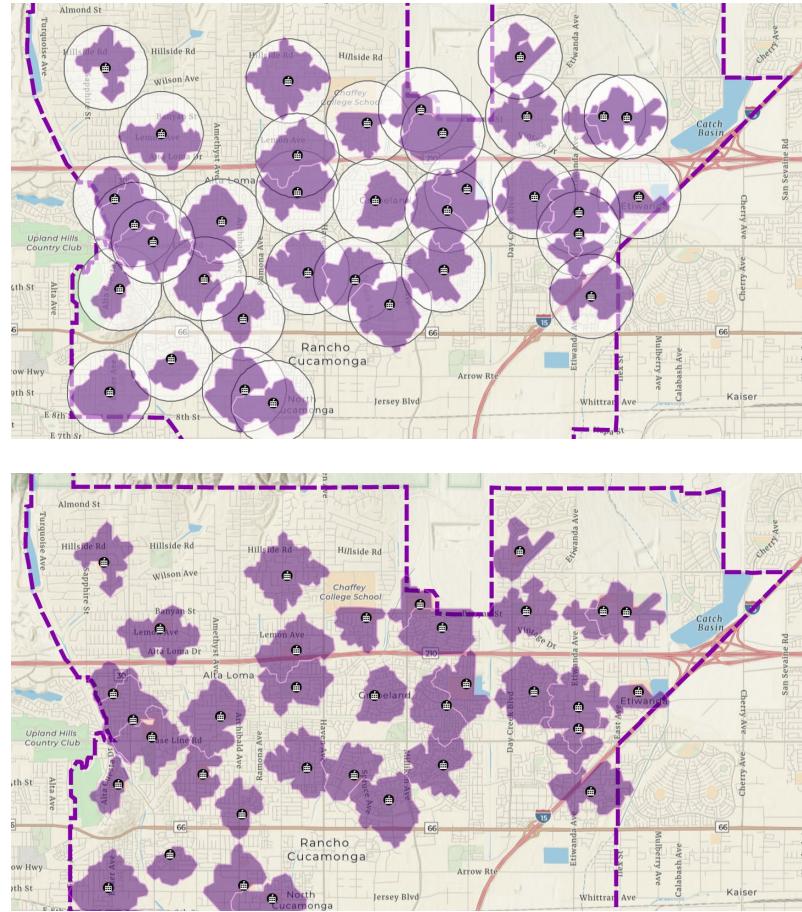
Geographic Bounds

- There should be restrictions on a map
 - Map Extent
 - Zoom
 - Bookmarks



Data Elements

- important to choose data that is relevant and current to the map (points of interest)
 - Names of the schools?
 - Name of the city?



Symbolization

Consider the intended audience of the map.
Be careful of acronyms

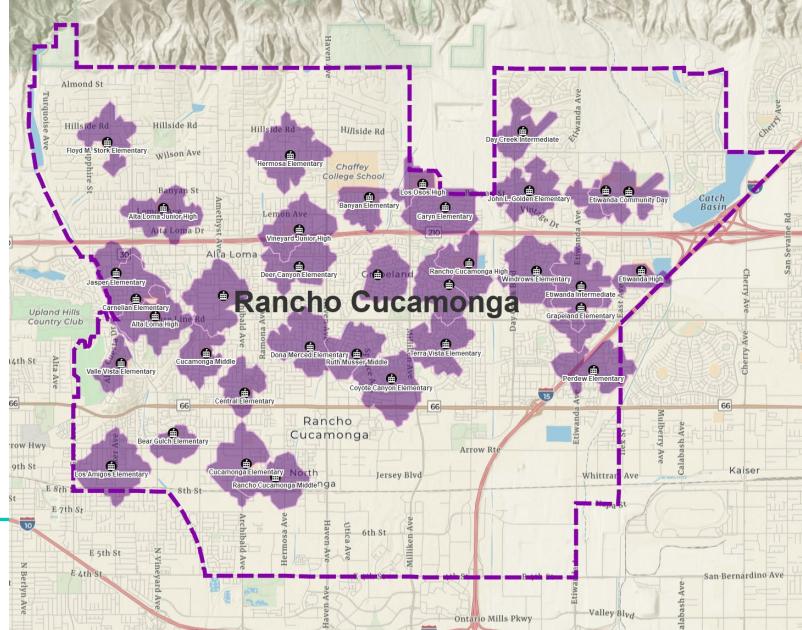
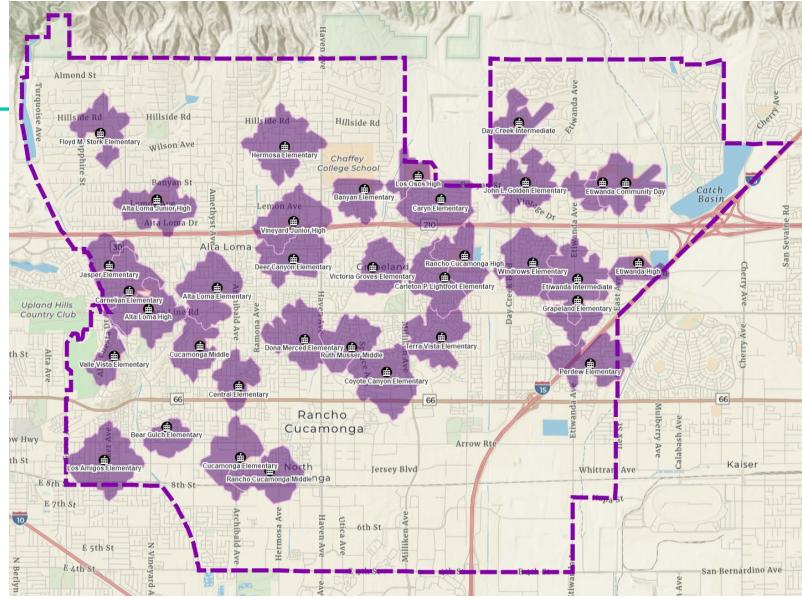
Contents

- RC Public Schools
- Travel from RC Public Schools (5 Miles)

- Half a Mile Around
- Rancho Cucamonga Boundary
- Rancho Cucamonga Boundary - copy
- Public School Locations - Current

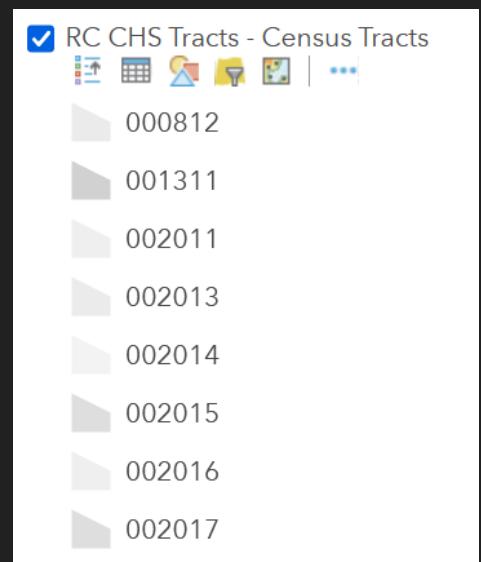
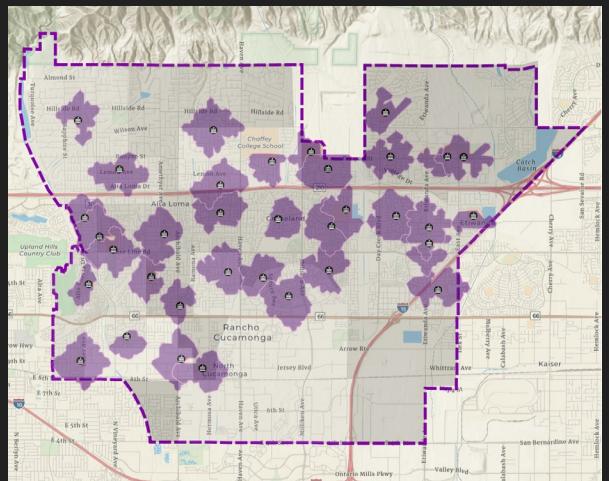
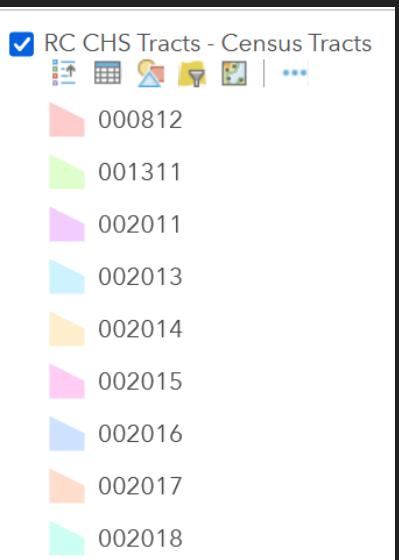
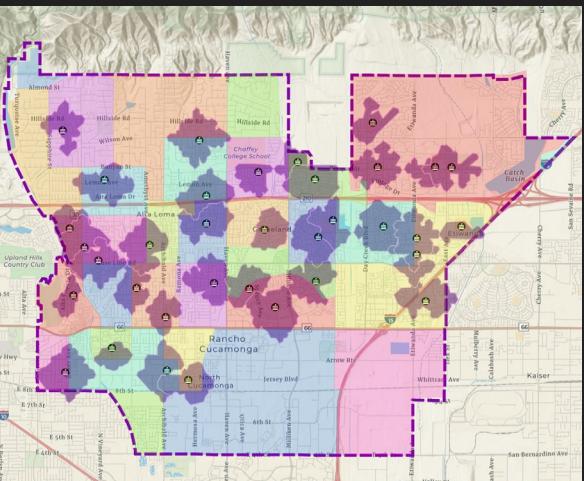
Labels

Used sparingly and show only major points of interest in order to make the map more legible



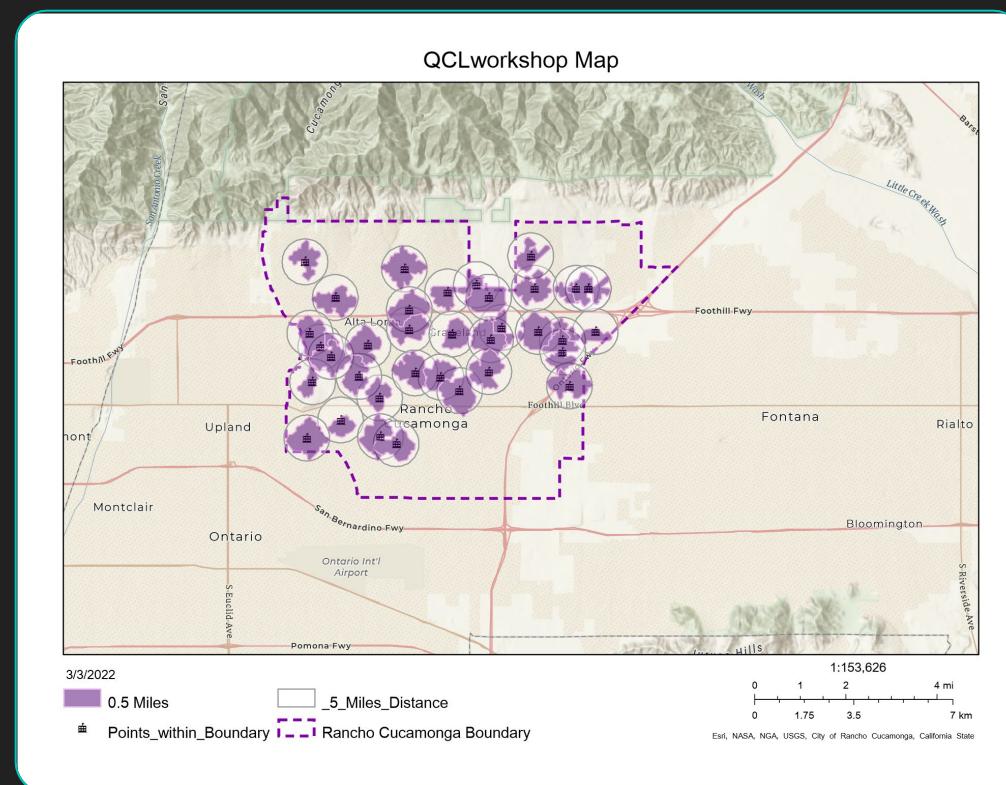
Legend

Use colors that are easily discernible from each other with the naked eye



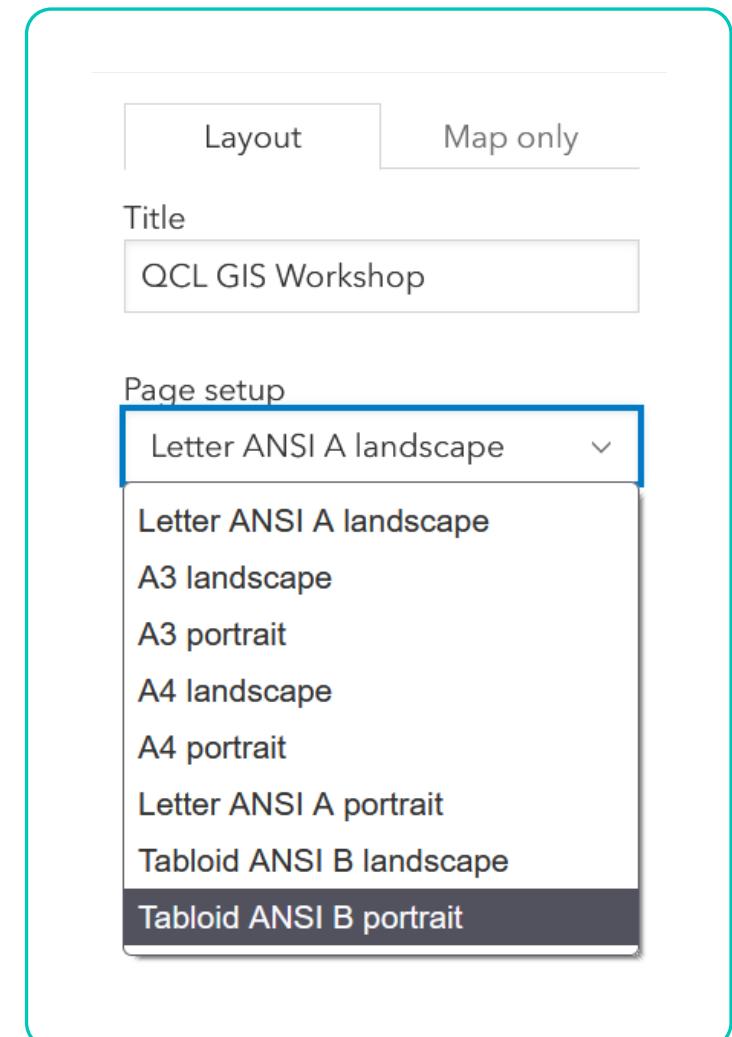
Map Elements

Jon Zeitler, Science and Operations Officer at the National Weather Service Forecast Office state that “[t]he addition of a north arrow can never harm a figure, only help with clarity.” (Debate)



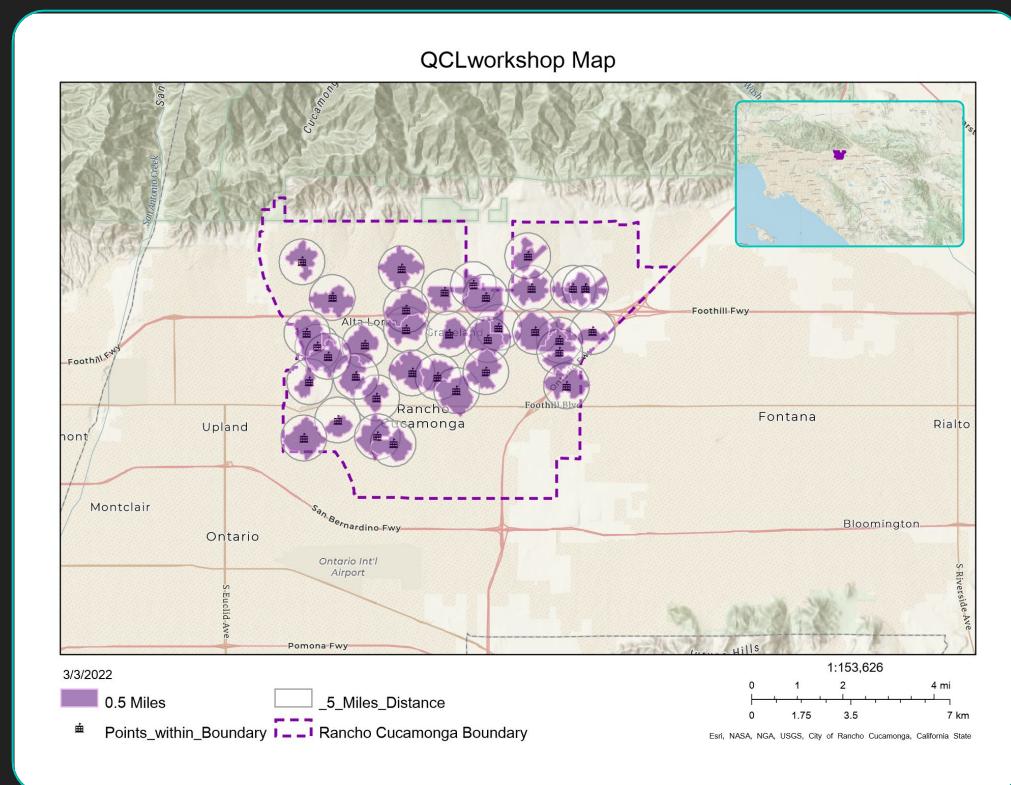
Map Layout

orientation (portrait versus landscape)

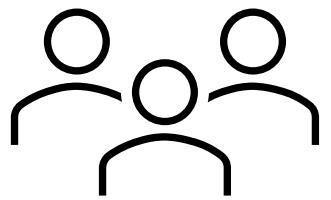
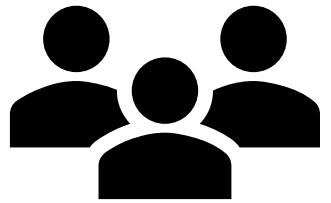


Locator Map

Helpful to include a smaller inset map showing the location of the mapped area. This helps to further orient the viewer in placing the geographic context of the map



Peer Review



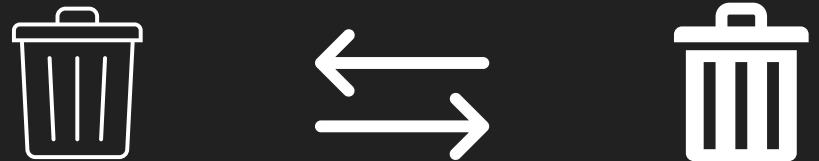
Another set of eyeballs on a map, especially a critical one, should automatically be a part of your cartographic process

Importing files

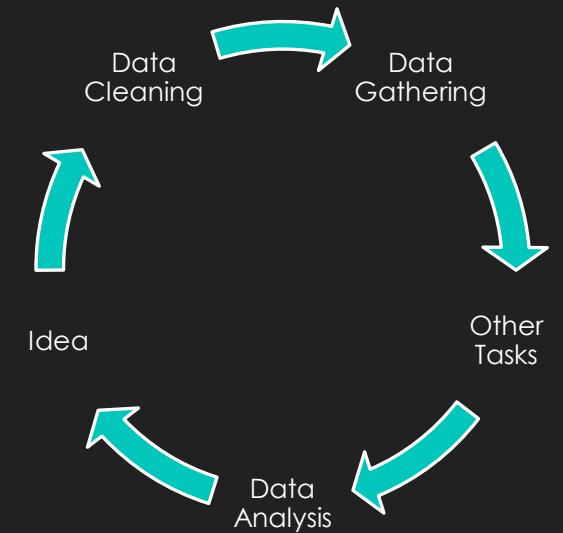
Setting up your files

Clean data

1. Remove duplicate observations
2. Fix errors
3. Filter Outliers
4. Missing data handled
 - Drop
 - Add values based on other data
5. Validate
 - Data makes sense
 - Rules of field
 - Insight to theory



Garbage Data = Garbage Results



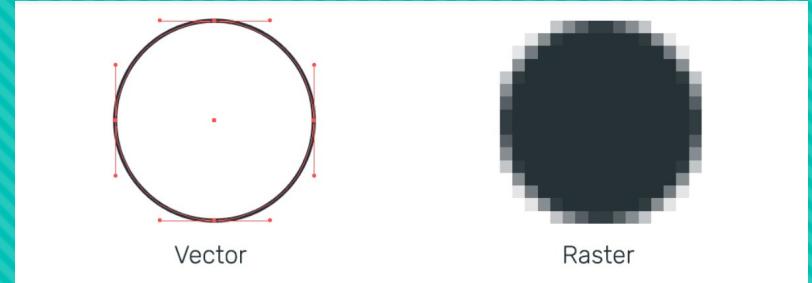
Process for data

1. Three Websites (Movoto, Redfin, and Zillow)
2. Scraper (instant data scraper extension on chrome)
3. Three files downloaded and combined in Excel
4. Cleaned data

Excel Data Visual

	Lister	Address	City	State	Zip	List_price	List_beds	List_bath	List_sqft	Url
1	Lister	10187 Indian Summer Dr UNIT B	Rancho Cucamonga	CA	91730	479000	3 beds	3 bath	1339 sqft	https://www.zillow.com/homedetails/10187-Indian-Summer-Dr-UNIT-B-Rancho-Cucamonga-CA-91730/17298901_zpid/
2	USA LIFE MANAGEMENT CORP.	10210 Baseline Rd SPACE 155	Rancho Cucamonga	CA	91701	199900	2 beds	2 baths	1400 sqft	https://www.zillow.com/homedetails/10210-Baseline-Rd-SPACE-155-Rancho-Cucamonga-CA-91701/64755497_zpid/
3	DPP	10440 Pepper St	Rancho Cucamonga	CA	91730	767000	4 beds	2 baths	1,710 sqft	https://www.movoto.com/rancho-cucamonga-ca/10440-pepper-st-rancho-cucamonga-ca-91730/pid_x3ivjb48g/for-sale/
4	MOVOTO	10655 Lemon Ave APT 103	Rancho Cucamonga	CA	91737	430000	2 beds	2 bath	983 sqft	https://www.zillow.com/homedetails/10655-Lemon-Ave-APT-103-Rancho-Cucamonga-CA-91737/64445947_zpid/
5	PREMIER REALTY GROUP SERVICES	10655 Lemon Ave APT 2906	Rancho Cucamonga	CA	91737	350000	1 beds	1 bath	728 sqft	https://www.zillow.com/homedetails/10655-Lemon-Ave-APT-2906-Rancho-Cucamonga-CA-91737/64485638_zpid/
6	COLDWELL BANKER RESIDENTIAL BR	10827 Carriage Dr	Rancho Cucamonga	CA	91737	228000	5 beds	5 bath	4504 sqft	https://www.zillow.com/homedetails/10827-Carriage-Dr-Rancho-Cucamonga-CA-91737/17594841_zpid/
7	CENTURY 21 CITRUS REALTY INC	11107 Delaware St	Rancho Cucamonga	CA	91701	775000	3 beds	3 bath	1550 sqft	https://www.zillow.com/homedetails/11107-Delaware-St-Rancho-Cucamonga-CA-91701/17598486_zpid/
8	ALTA REALTY GROUP CA, INC	4980 Ambleside Pl	Rancho Cucamonga	CA	91739	1999000	5 beds	6 bath	4,273 sqft	https://www.zillow.com/homedetails/4980-Ambleside-Pl-Etiwanda-CA-91739/122898054_zpid/
9	RE/MAX EMPIRE PROPERTIES	5216 Flora Ct	Rancho Cucamonga	CA	91739	1284000	5 beds	4 baths	3,560 sqft	https://www.movoto.com/rancho-cucamonga-ca/5216-flora-ct-rancho-cucamonga-ca-91739-202_i07149253/for-sale/
10	MOVOTO	5520 Lane	Rancho Cucamonga	CA	91737	79900	1 beds	1 bath	267 sqft	https://www.zillow.com/homedetails/5520-Lane-Rancho-Cucamonga-CA-91737/2066420654_zpid/
11	MB PROPERTIES & INVESTMENTS	5864 Greyville Pl	Rancho Cucamonga	CA	91739	1350000	5 beds	3 baths	3,372 sqft	https://www.movoto.com/rancho-cucamonga-ca/5864-greyville-pl-rancho-cucamonga-ca-91739-202_i11044918/for-sale/
12	MOVOTO	6370 Terracina Ave	Rancho Cucamonga	CA	91737	808000	3 beds	2 bath	1,715 sqft	https://www.zillow.com/homedetails/6370-Terracina-Ave-Rancho-Cucamonga-CA-91737/17287854_zpid/
13	ROYAL HOMES & LOANS	7055 Avenida Leon St	Rancho Cucamonga	CA	91701	699900	3 beds	2 bath	1,627 sqft	https://www.zillow.com/homedetails/7055-Avenida-Leon-St-Rancho-Cucamonga-CA-91701/2064156192_zpid/
14	MAINTSTREET REALTORS	7331 Shelly Pl #47	Rancho Cucamonga	CA	91739	599995	3 beds	2.5 baths	1,549 sqft	https://www.redfin.com/Ca/Rancho-Cucamonga/7331-Shelly-Pl-91739/unit-47/home/167417085
15	REDFIN	7432 Holloway Rd	Rancho Cucamonga	CA	91730	808000	4 beds	3 bath	2,005 sqft	https://www.zillow.com/homedetails/7432-Holloway-Rd-Rancho-Cucamonga-CA-91730/17313003_zpid/
16	RE/MAX VISION	7545 Oakford Ct	Rancho Cucamonga	CA	91739	958000	5 beds	3 baths	3,100 sqft	https://www.movoto.com/rancho-cucamonga-ca/7545-oakford-ct-rancho-cucamonga-ca-91739-202_i1615659/for-sale/
17	MOVOTO	7729 Hess Pl #U2	Rancho Cucamonga	CA	91739	619000	3 beds	3 baths	1,508 sqft	https://www.zillow.com/homedetails/7729-Hess-Pl-U2-rancho-cucamonga-ca-91739/pid_dyrzgb48g/for-sale/
18	MOVOTO	7729 Hess Pl Unit U2	Rancho Cucamonga	CA	91739	619000	3 beds	2.5 baths	1,508 sqft	https://www.redfin.com/CA/Rancho-Cucamonga/7729-Hess-Pl-91739/unit-U2/home/4294771
19	REDFIN	8359 Hawthorne St	Rancho Cucamonga	CA	91701	700000	4 beds	3 bath	2,000 sqft	https://www.zillow.com/homedetails/8359-Hawthorne-St-Alta-Loma-CA-91701/17290191_zpid/
20	REALTY ONE GROUP EMPIRE	8389 Lion St	Rancho Cucamonga	CA	91730	699000	4 beds	2 bath	1,426 sqft	https://www.zillow.com/homedetails/8389-Lion-St-Rancho-Cucamonga-CA-91730/17298656_zpid/
21	WILLIAM JOHNSON, BROKER	8560 Beechwood Dr	Rancho Cucamonga	CA	91701	1300000	4 beds	3 bath	2,075 sqft	https://www.zillow.com/homedetails/8560-Beechwood-Dr-Alta-Loma-CA-91701/17590740_zpid/
22	OFFERPAD BROKERAGE CA, INC.	9340 Foothill Blvd TRAILER 23	Rancho Cucamonga	CA	91730	239999	3 beds	2 bath	960 sqft	https://www.zillow.com/homedetails/9340-Foothill-Blvd-TRAILER-23-Rancho-Cucamonga-CA-91730/82908925_zpid/
23	BERKSHIRE HATH HM SVCS CA PROP	9806 Hibiscus Ct	Rancho Cucamonga	CA	91737	719900	3 beds	2 bath	1,433 sqft	https://www.zillow.com/homedetails/9806-Hibiscus-Ct-Rancho-Cucamonga-CA-91737/17288925_zpid/
24	EXCELLENCE PREMIER REAL ESTATE	9999 Foothill Blvd SPACE 20	Rancho Cucamonga	CA	91730	99000	3 beds	2 baths	1,344 sqft	https://www.zillow.com/homedetails/9999-Foothill-Blvd-SPACE-20-Rancho-Cucamonga-CA-91730/82916012_zpid/
25	RE/MAX MASTERS REALTY	10043 Norwick St	Rancho Cucamonga	CA	91730	680000	3 beds	2 bath	1,552 sqft	https://www.zillow.com/homedetails/10043-Norwick-St-Rancho-Cucamonga-CA-91730/17600835_zpid/
26	DPP	10210 Base Line Rd #139	Rancho Cucamonga	CA	91701	145000	2 beds	2 bath	1,536 sqft	https://www.zillow.com/homedetails/10210-Base-Line-Rd-139-Rancho-Cucamonga-CA-91701/2063214436_zpid/
27	LEXINGTON REALTY	10549 Deer Canyon Dr	Rancho Cucamonga	CA	91737	180000	4 beds	4 bath	4,364 sqft	https://www.zillow.com/homedetails/10549-Deer-Canyon-Dr-Rancho-Cucamonga-CA-91737/17594471_zpid/
28	BERKSHIRE HATH HM SVCS CA PROP	10571 Shady Lane Ct	Rancho Cucamonga	CA	91737	185000	4 beds	5 bath	4,473 sqft	https://www.zillow.com/homedetails/10571-Shady-Lane-Ct-Rancho-Cucamonga-CA-91737/2720096_zpid/
29	CENTURY 21 PRIMETIME REALTORS	11397 Genova Rd	Rancho Cucamonga	CA	91701	830000	4 beds	3 bath	2,039 sqft	https://www.zillow.com/homedetails/11397-Genova-Rd-Rancho-Cucamonga-CA-91701/59197643_zpid/
30	RE/MAX MASTERS REALTY	11817 Bunker Hill Dr	Rancho Cucamonga	CA	91730	875000	4 beds	3 bath	2,684 sqft	https://www.zillow.com/homedetails/11817-Bunker-Hill-Dr-Rancho-Cucamonga-CA-91730/61650158_zpid/
31	REALTY MASTERS & ASSOCIATES	12248 Canyon Meadows Dr	Rancho Cucamonga	CA	91739	998000	5 beds	3 bath	2,836 sqft	https://www.zillow.com/homedetails/12248-Canyon-Meadows-Dr-Etiwanda-CA-91739/61682988_zpid/
32	KELLER WILLIAMS EMPIRE ESTATES	12850 Tilden Dr	Rancho Cucamonga	CA	91739	988888	4 beds	3 bath	2,992 sqft	https://www.zillow.com/homedetails/12850-Tilden-Dr-Rancho-Cucamonga-CA-91739/59200071_zpid/
33	DYNASTY REAL ESTATE	13127 Malvasia Way	Rancho Cucamonga	CA	91739	769900	3 beds	2 bath	1,748 sqft	https://www.zillow.com/homedetails/13127-Malvasia-Way-Rancho-Cucamonga-CA-91739/61685092_zpid/
34	EHOMES	14108 Arcadia Way	Rancho Cucamonga	CA	91739	899900	4 beds	2 bath	2,193 sqft	https://www.zillow.com/homedetails/14108-Arcadia-Way-Rancho-Cucamonga-CA-91739/17310210_zpid/
35	THE SKYE GROUP INC.	14135 Regina Dr	Rancho Cucamonga	CA	91739	1100000	5 beds	3 baths	3,500 sqft	https://www.zillow.com/homedetails/14135-Regina-Dr-Rancho-Cucamonga-CA-91739/17311993_zpid/
36	CENTURY 21 LOIS LAUER REALTY	6003 Falling Tree Ln	Rancho Cucamonga	CA	91737	1300000	5 beds	3 bath	3,057 sqft	https://www.zillow.com/homedetails/6003-Falling-Tree-Ln-Rancho-Cucamonga-CA-91737/17591885_zpid/
37	EXP REALTY OF CALIFORNIA INC	6121 Hilltop Ct	Rancho Cucamonga	CA	91737	800000	4 beds	2 bath	1,982 sqft	https://www.zillow.com/homedetails/6121-Hilltop-Ct-Rancho-Cucamonga-CA-91737/17308878_zpid/
38	SOUTHLAND PROPERTIES	6944 London Ave	Rancho Cucamonga	CA	91701	765000	4 beds	2 bath	1,594 sqft	https://www.zillow.com/homedetails/6944-London-Ave-Rancho-Cucamonga-CA-91701/17595752_zpid/
39	BERKSHIRE HATH HM SVCS CA PROP	7063 Larkspur Pl	Rancho Cucamonga	CA	91739	589990	3 beds	2 bath	949 sqft	https://www.zillow.com/homedetails/7063-Larkspur-Pl-Rancho-Cucamonga-CA-91739/59199775_zpid/
40	COMPASS	7131 Aloe Ct	Rancho Cucamonga	CA	91739	895000	3 beds	3 bath	2,805 sqft	https://www.zillow.com/homedetails/7131-Aloe-Ct-Rancho-Cucamonga-CA-91739/53061899_zpid/
41	COLDWELL BANKER BLACKSTONE RTY	7570 Dartmouth Ave	Rancho Cucamonga	CA	91730	630000	3 beds	2 bath	1,302 sqft	https://www.zillow.com/homedetails/7570-Dartmouth-Ave-Rancho-Cucamonga-CA-91730/17600330_zpid/
42	KELLER WILLIAMS SIGNATURE	7604 Duck Creek Pl	Rancho Cucamonga	CA	91739	898000	4 beds	3 baths	2,717 sqft	https://www.zillow.com/homedetails/7604-Duck-Creek-Pl-Rancho-Cucamonga-CA-91739/63121092_zpid/
43	HERITAGE REALTY	7730 Cardiff Pl	Rancho Cucamonga	CA	91730	665000	3 beds	2 bath	1,186 sqft	https://www.zillow.com/homedetails/7730-Cardiff-Pl-Rancho-Cucamonga-CA-91730/17601927_zpid/
44	COLDWELL BANKER REALTY	9616 Norbrook Dr	Rancho Cucamonga	CA	91737	2400000	5 beds	7 baths	5,809 sqft	https://www.zillow.com/homedetails/9616-Norbrook-Dr-Rancho-Cucamonga-CA-91737/69009744_zpid/
45	BERKSHIRE HATH HM SVCS CA PROP	9996 Hemlock St	Rancho Cucamonga	CA	91730	670000	4 beds	2 bath	1,761 sqft	https://www.zillow.com/homedetails/9996-Hemlock-St-Rancho-Cucamonga-CA-91730/17600928_zpid/

GIS Data



Shape File

- SHP
- DBF
- SHX
- PRJ

Geometry Type (Can not have a mixture of types)

- Point
- Line
- Polygon

Data Formats

LATITUDE	LONGITUDE
34.11	-117.53
34.11	-117.53
34.11	-117.53
34.08	-117.53
34.08	-117.53
34.08	-117.53
34.08	-117.54
34.08	-117.54
34.10	-117.61

CSV - Comma Separated Value File

- two extra columns are added to hold the x and y, or lat and lon
- Four extra columns are added to hold a modern address
- One extra column is added to hold zip code

File GeoDatabase

- a collection of files in a folder on disk that can store, query, and manage both spatial and nonspatial data

Tab File

- similar to the Shapefile

KML

- Google Earth

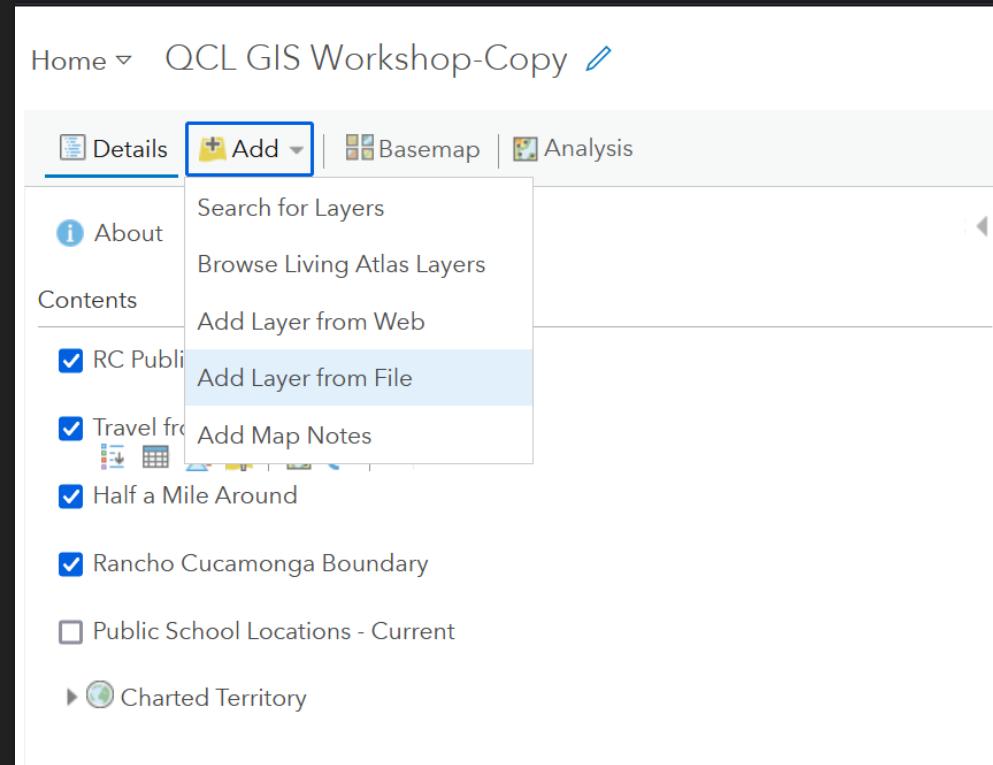
GeoJSON

- used by software developers
- output for API's (application programming interface)

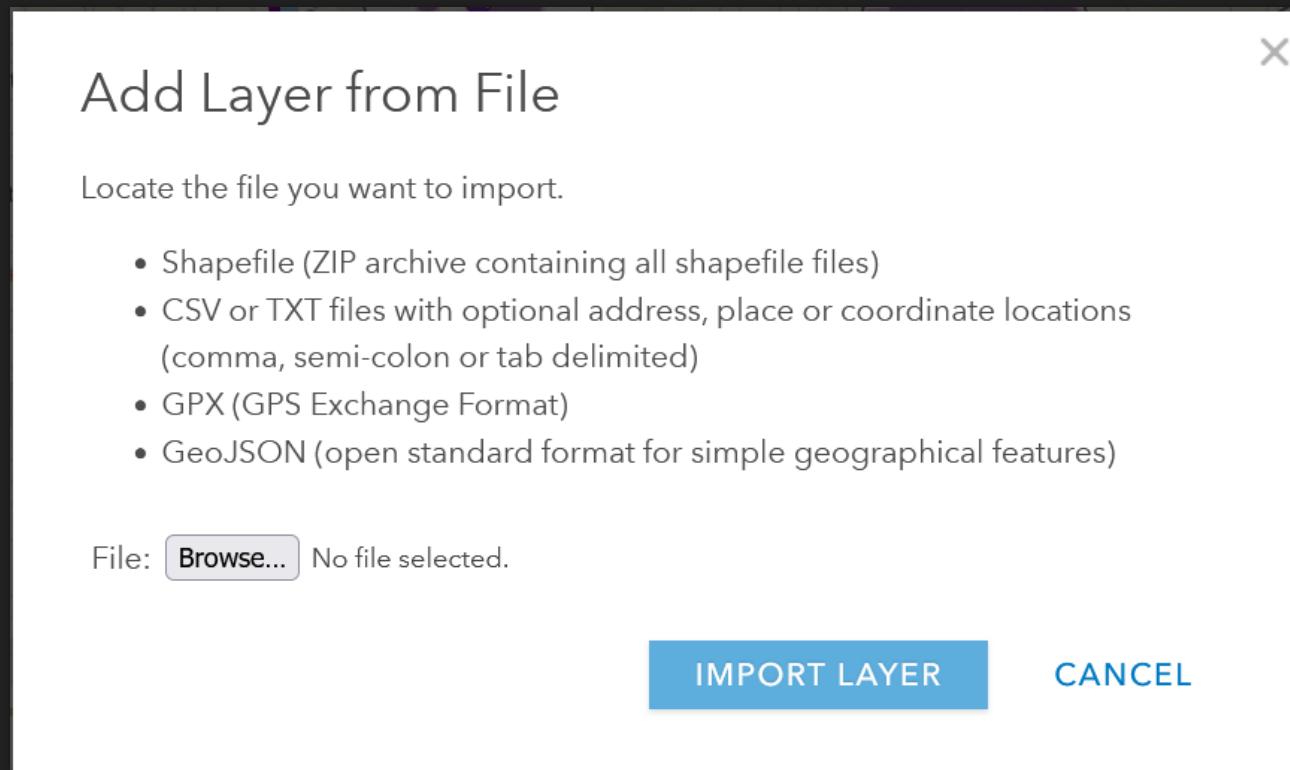
GeoTIFF

- output for API's (application programming interface)

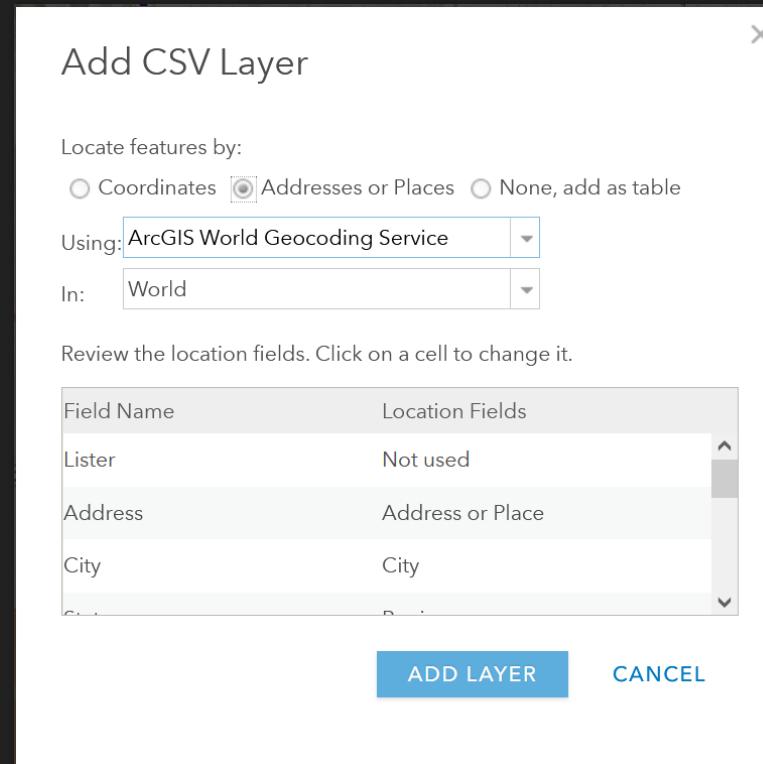
Importing your CSV File



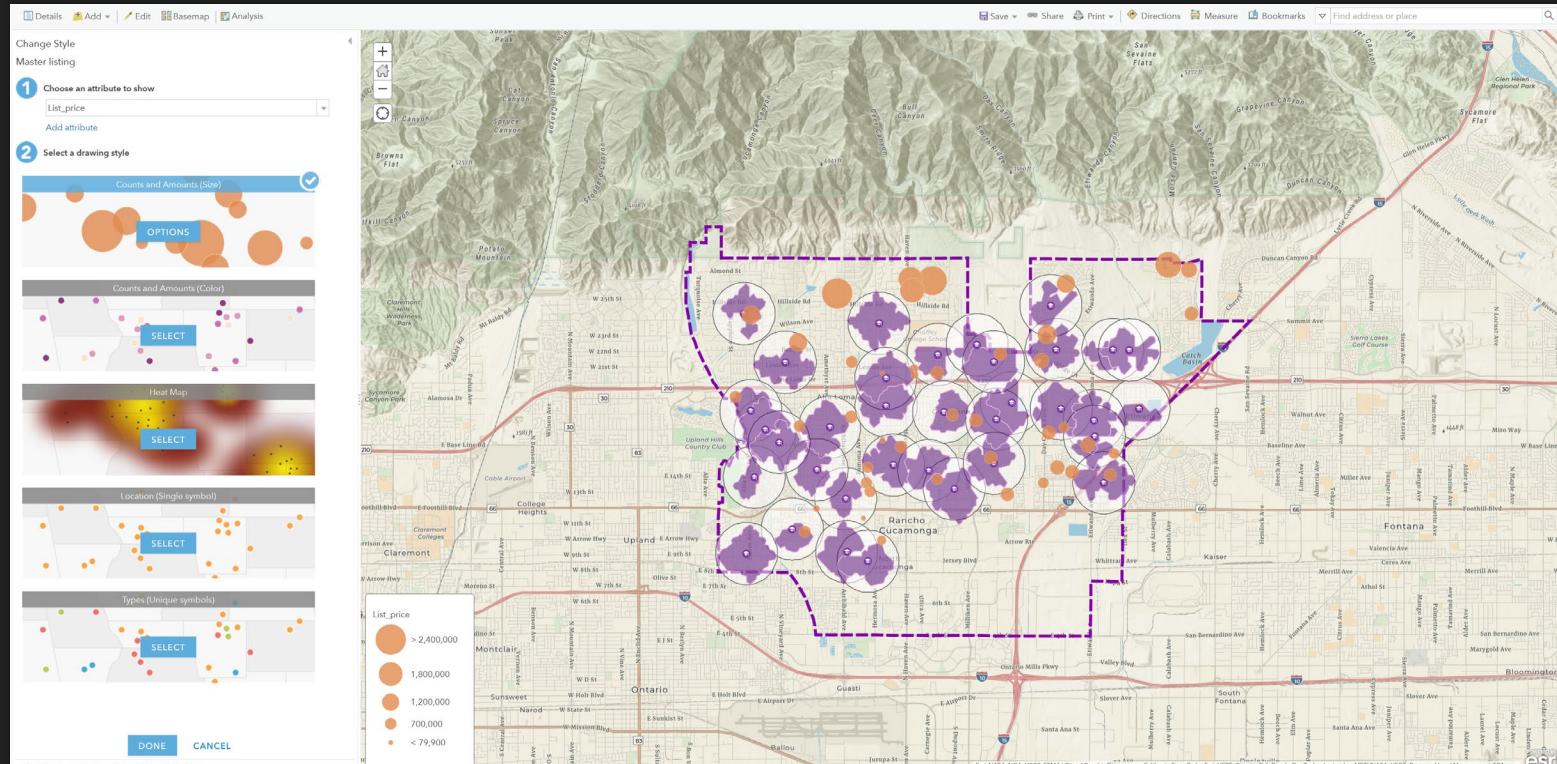
Look for your file



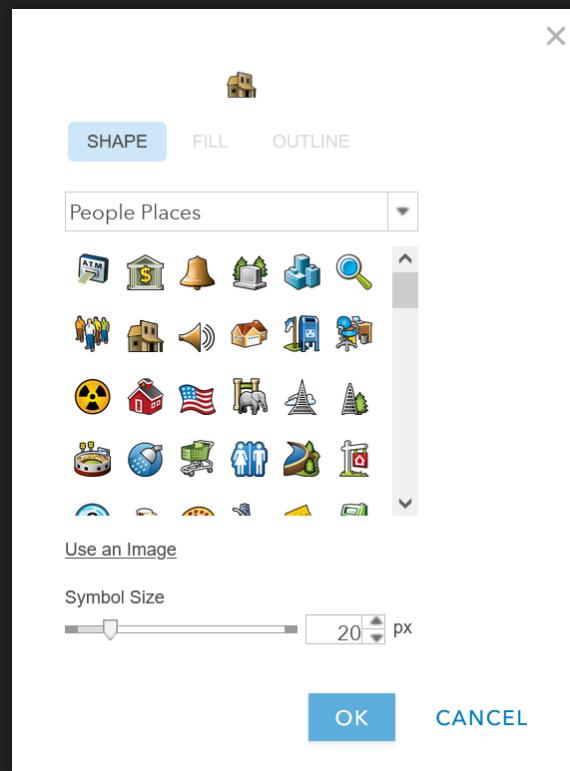
CSV Layer



Counts and Amounts



Icons



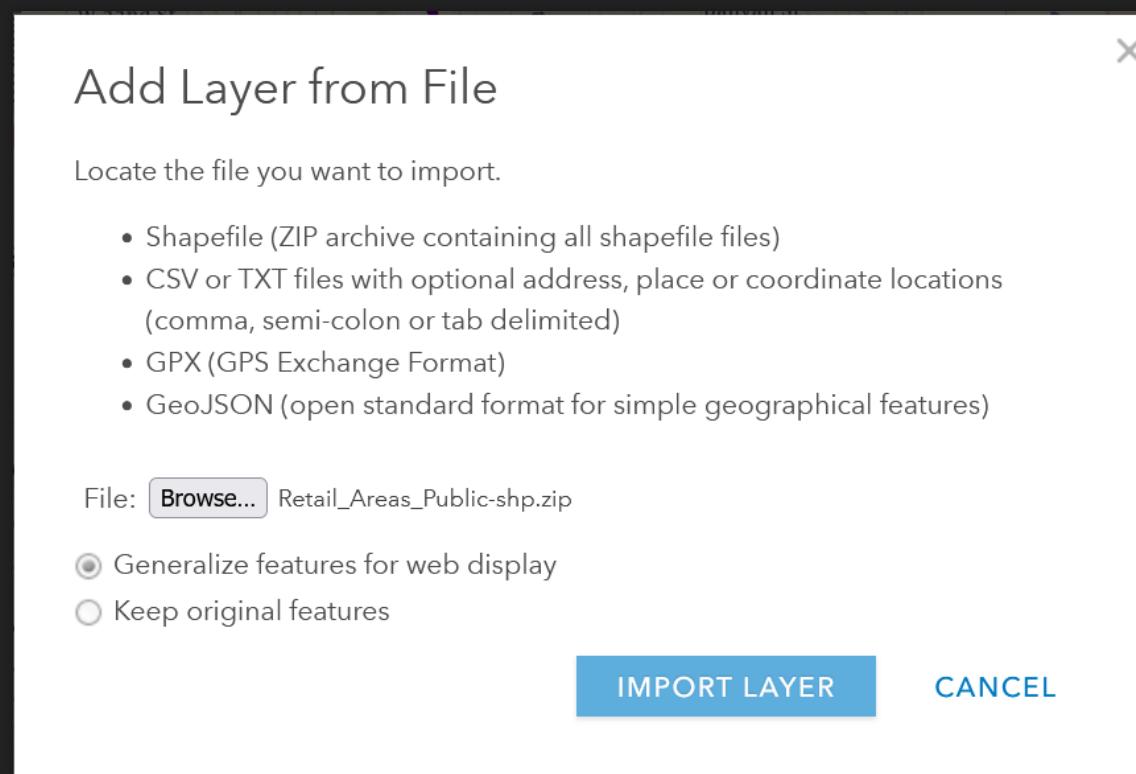
Where to find .shp files

The screenshot shows the homepage of the City of Rancho Cucamonga Open Data Portal. At the top left is the city logo and name. Below it is a search bar labeled "Search for Data". The main title "Open Data Portal" is centered above a section titled "Data Categories". This section contains six categories with corresponding icons: "Boundaries" (a map outline), "Community & Culture" (two people in a house), "Environment" (a plant), "Government" (a building with columns), "Infrastructure" (a road or bridge), and "Transportation" (a car). A descriptive text block below the categories states: "Search for the latest data and geographic content from the City of Rancho Cucamonga. Use keyword or geographic searches to find and quickly display content. City of Rancho Cucamonga is committed to being open, transparent and providing data that is easy to find, is accessible, and is usable."

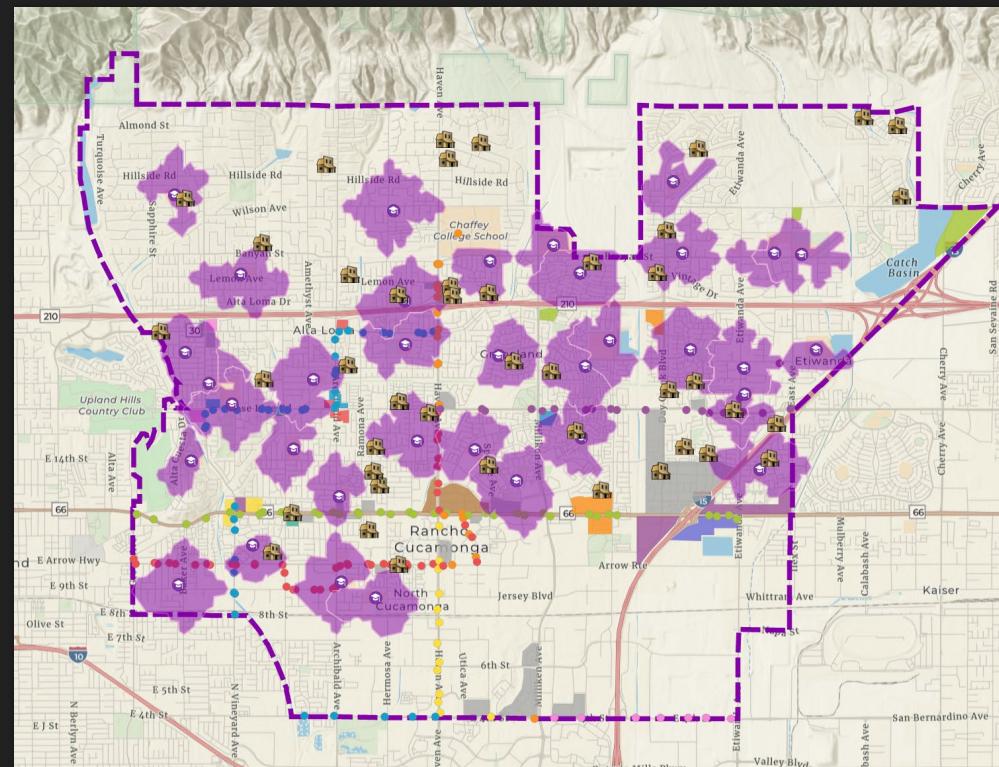
The screenshot shows the "Download Options" page for the "Retail Areas Public" dataset. At the top right is the city logo and name. Below it is a summary: "Records: 49", "Toggle Filters: ○", and a "CSV" section. The CSV section includes details: "File created: Nov 21, 2020, 21:10", "File size: 2.1 KB", and a "Download" button. Below this are sections for "KML", "Shapefile", "GeoJSON", and "File Geodatabase", each with similar details and a "Download" button.

Format	File created	File size
CSV	Nov 21, 2020, 21:10	2.1 KB
KML	Nov 21, 2020, 21:11	25.9 KB
Shapefile	Nov 21, 2020, 21:10	30.1 KB
GeoJSON	Nov 21, 2020, 21:11	33.9 KB
File Geodatabase	Nov 21, 2020, 21:03	34.0 KB

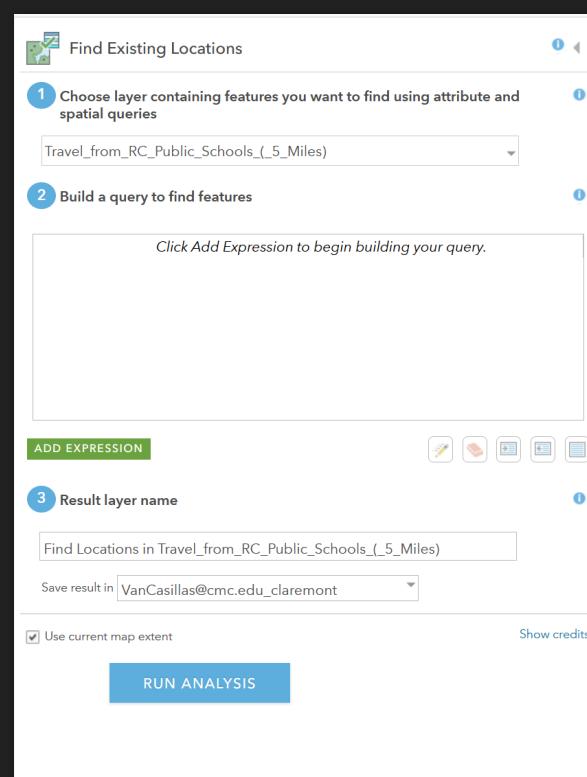
Adding a .shp file



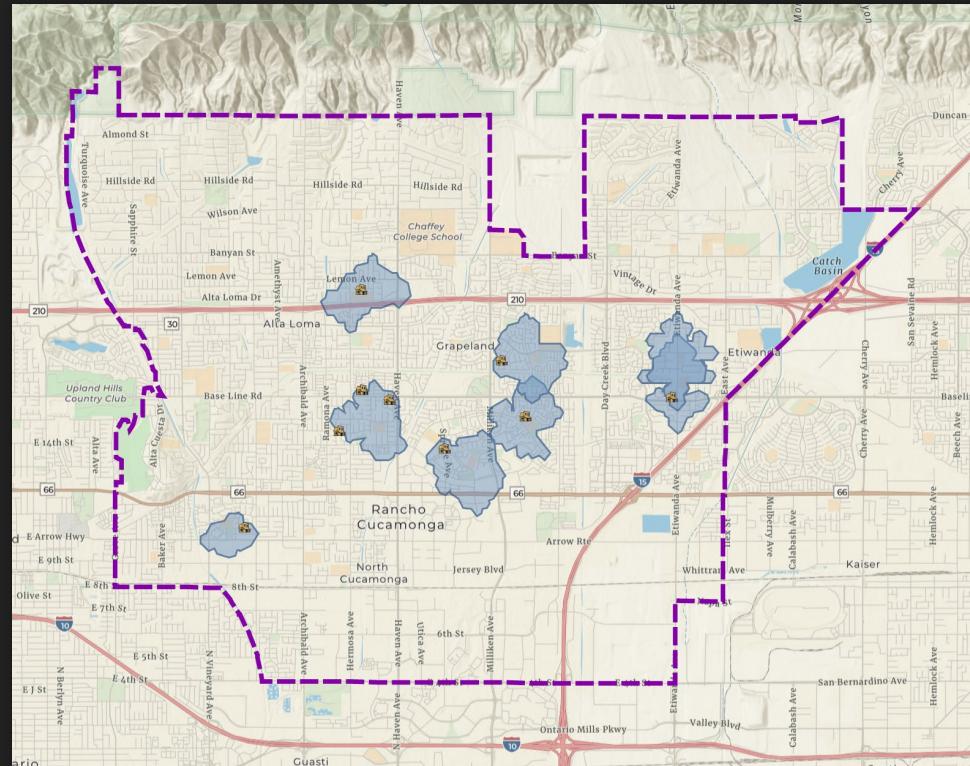
Too Much information



Existing Locations



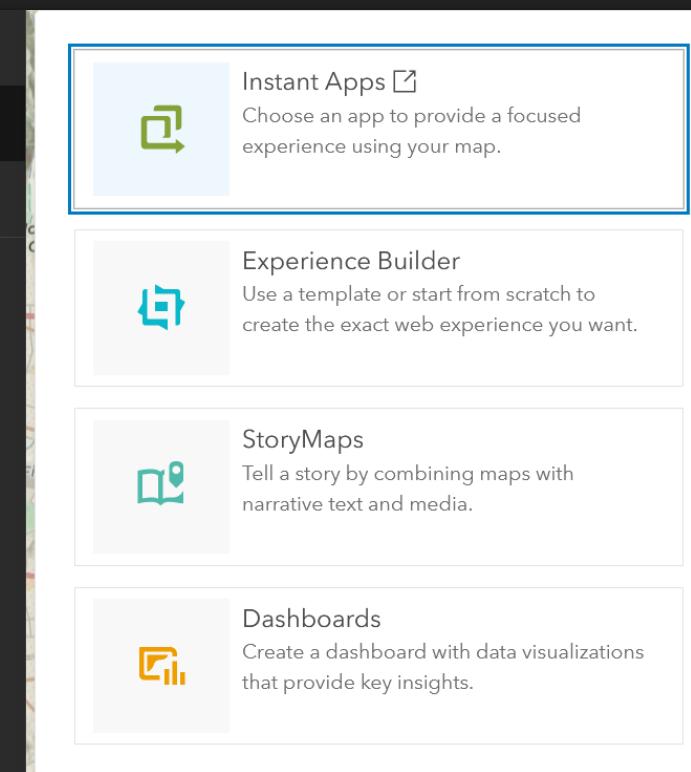
Much better view



Story Maps

Presentation

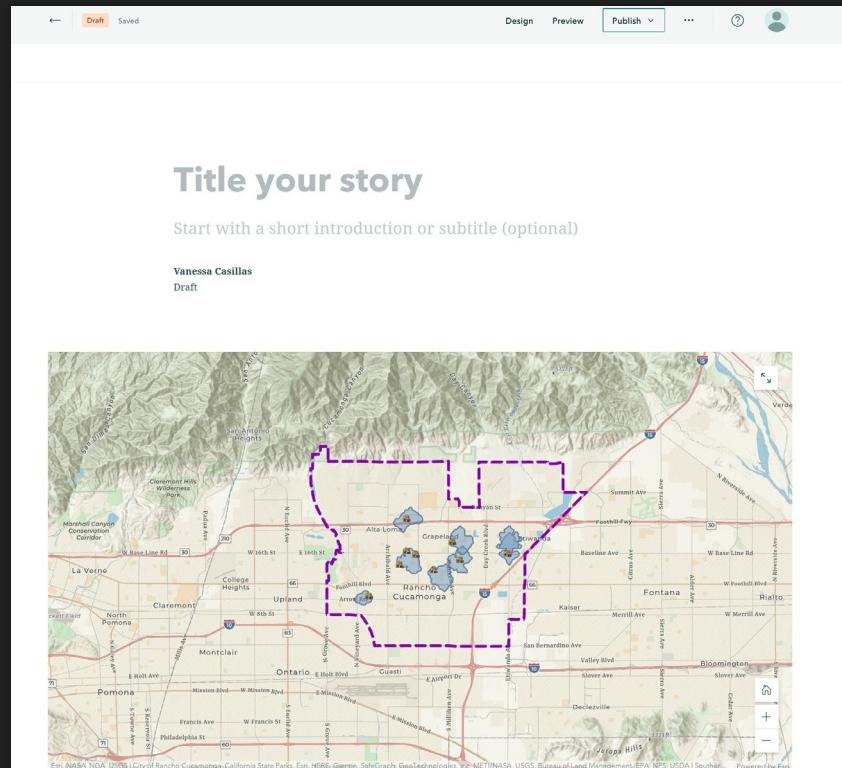
Options to your map



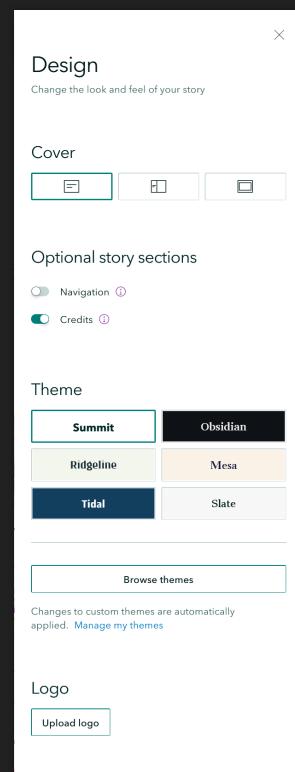
The screenshot shows a user interface for creating map-based experiences. On the left, there's a vertical toolbar with icons for a refresh arrow, a grid, and a print symbol. The main area displays four options in cards:

- Instant Apps**  Choose an app to provide a focused experience using your map.
- Experience Builder**  Use a template or start from scratch to create the exact web experience you want.
- StoryMaps**  Tell a story by combining maps with narrative text and media.
- Dashboards**  Create a dashboard with data visualizations that provide key insights.

Tell your Story



Designing



Homework – Be Creative

- Make a map using the City of Claremont or the Claremont colleges
 - Share it to group

Resources

ERSI: <https://www.esri.com/en-us/home>

ArcGIS: <https://learn-arcgis-learngis.hub.arcgis.com/>

Library: GIS Mondays

Contact

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