ARCGIS ONLINE

CRP 558 Technology Report

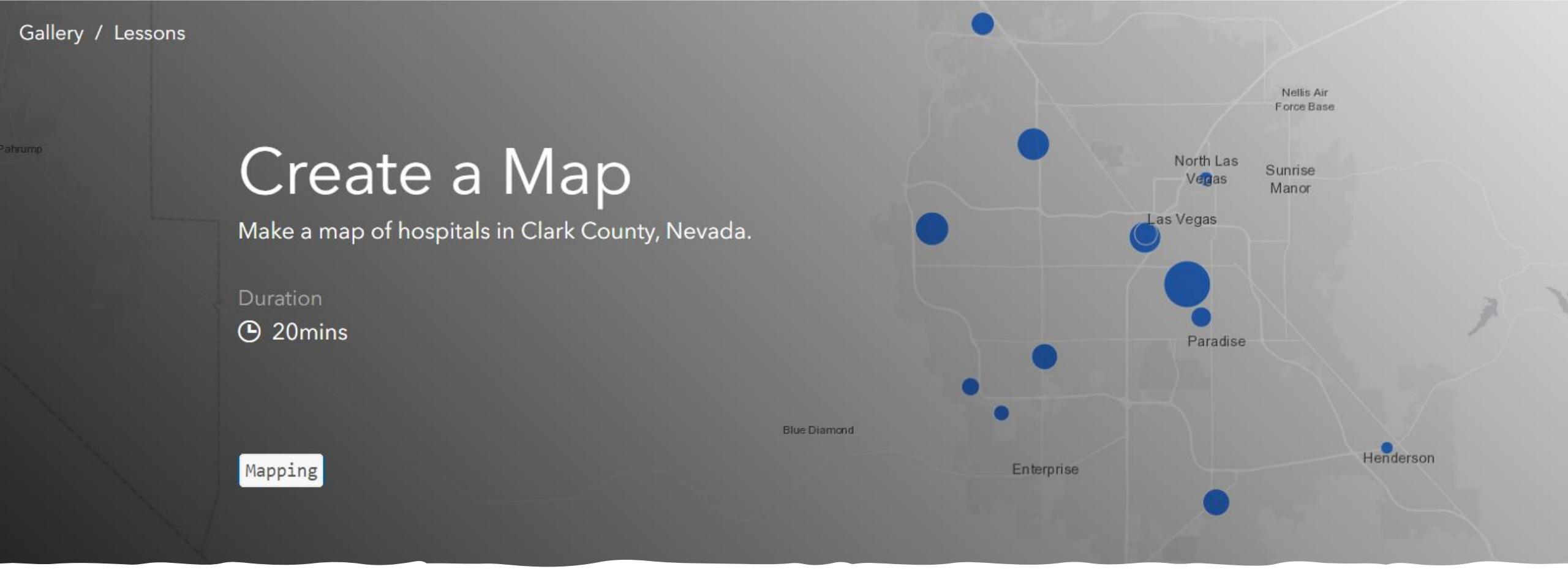
Emma Bravard

BACKGROUND INFO

- ArcGIS Online is a cloud-based mapping and analysis solution.
- Data and maps are stored in a secure and private infrastructure and can be configured to meet mapping and IT requirements of different organizations.
- Main utility:
  - make maps
  - analyze data
  - share and collaborate
  - work with data

DEVELOPER TOOLS, DATA VISUALIZATION, MAPS, AND LAYERS

- All ArcGIS Online capabilities are available through APIs and SDKs.
  - Application Programming Interface (API) is an interface that allows software programs to interact with each other, whereas a Software Development Kit (SDK) is a set of tools, libraries, and relevant documentation that can be used to develop software applications for a specific platform. SDKs are the origination sources for almost every program a modern user would interact with.
- Data visualization includes 2D and 3D capabilities, pop-ups, data-driven styling, display labels and callouts, and GPU accelerated rendering.
- Maps, layers and data accessible through ArcGIS Online include vector basemaps, world imagery, additional OpenStreetMap based vector basemaps, geospatial content, and open data from a variety of different organizations.
- ArcGIS Online projects can also incorporate data and maps from ArcGIS Living Atlas of the World, the most comprehensive collection of global geographic information.

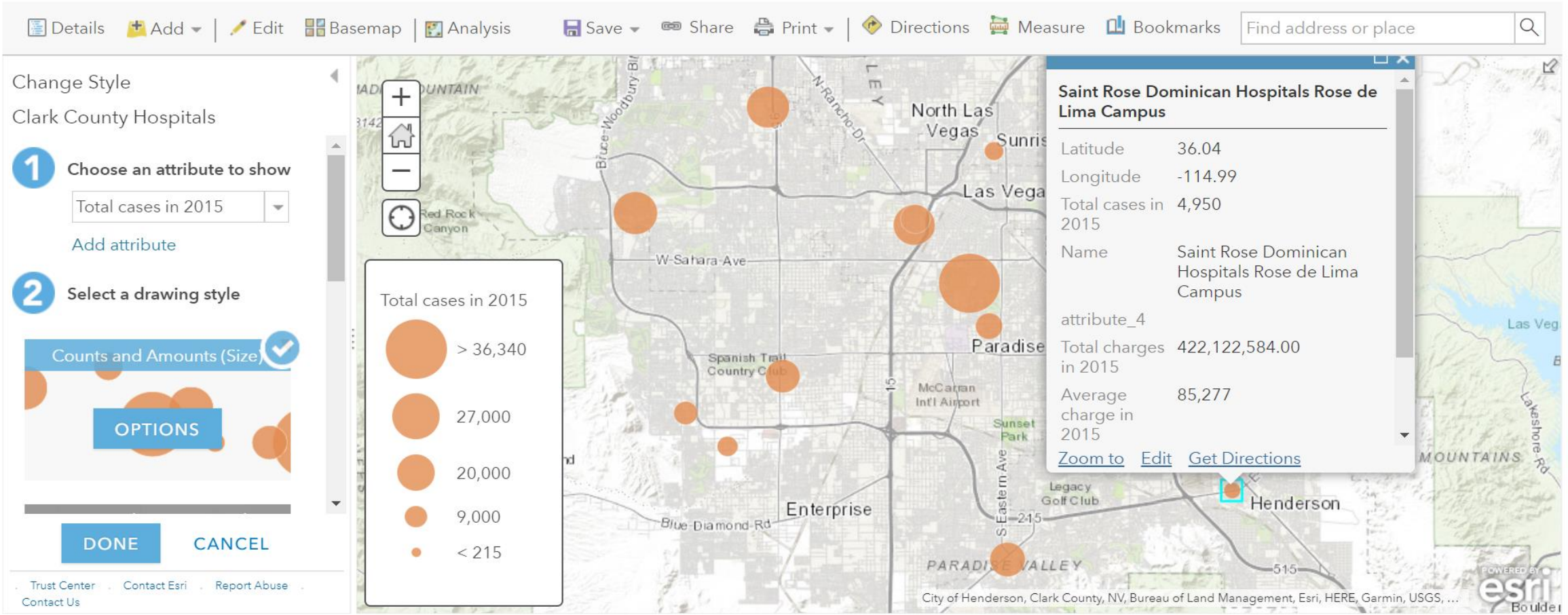


DEMO PROJECT

- ArcGIS Online provides a wide variety of tutorials for everything from creating maps, to creating 3D scenes, to creating web apps. All of these quick lessons can be found on their webpage and include step-by-step instructions.
- The following are my results for the “Create a Map” lesson.

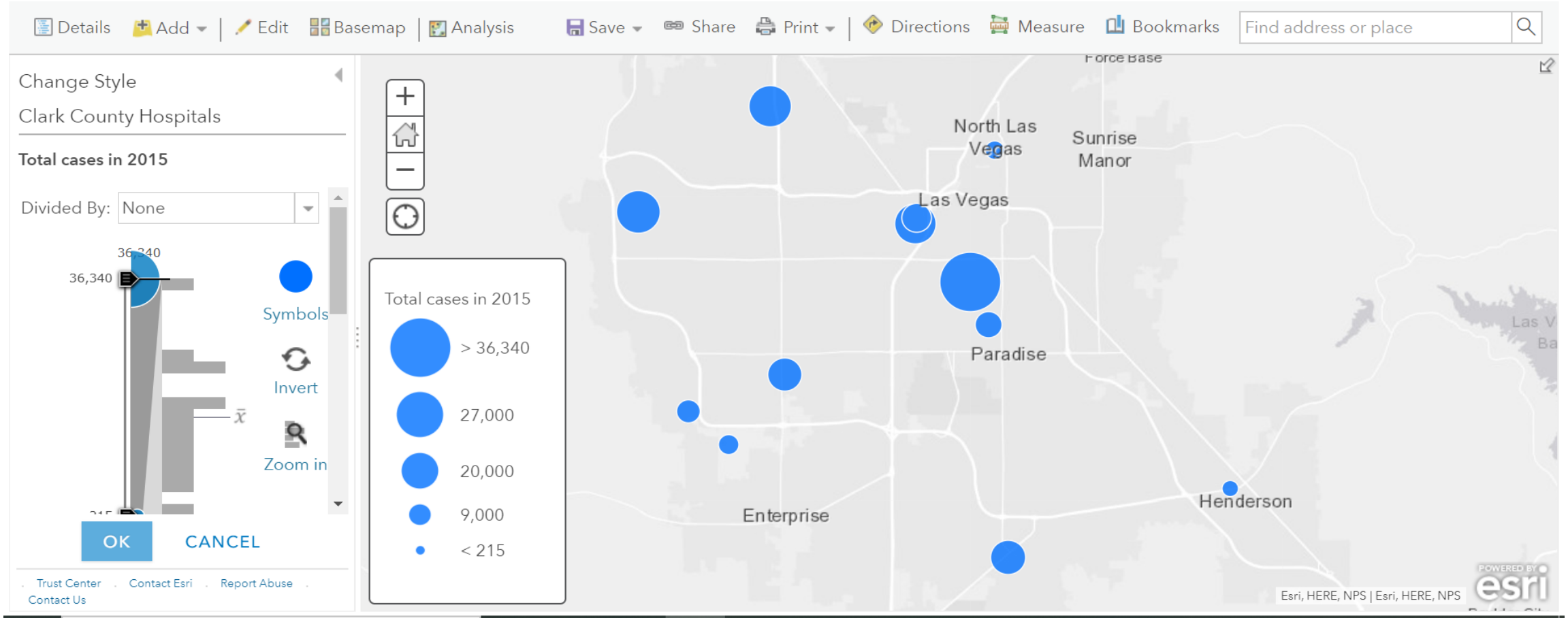
CREATE A MAP

- Download hospital data from Clark County, Nevada from the public group in ArcGIS Online.
  - This CSV file contains longitude, latitude, name, total cases, and total cost of hospital in Clark County.
- Next, open a new map and add the data layer
- Once the data layer is imported, the map viewer will read the information in the file and display the data in a meaningful way to identify patterns.
- The map also allows the user to view pop-ups for the dataset, in this case, for each hospital.



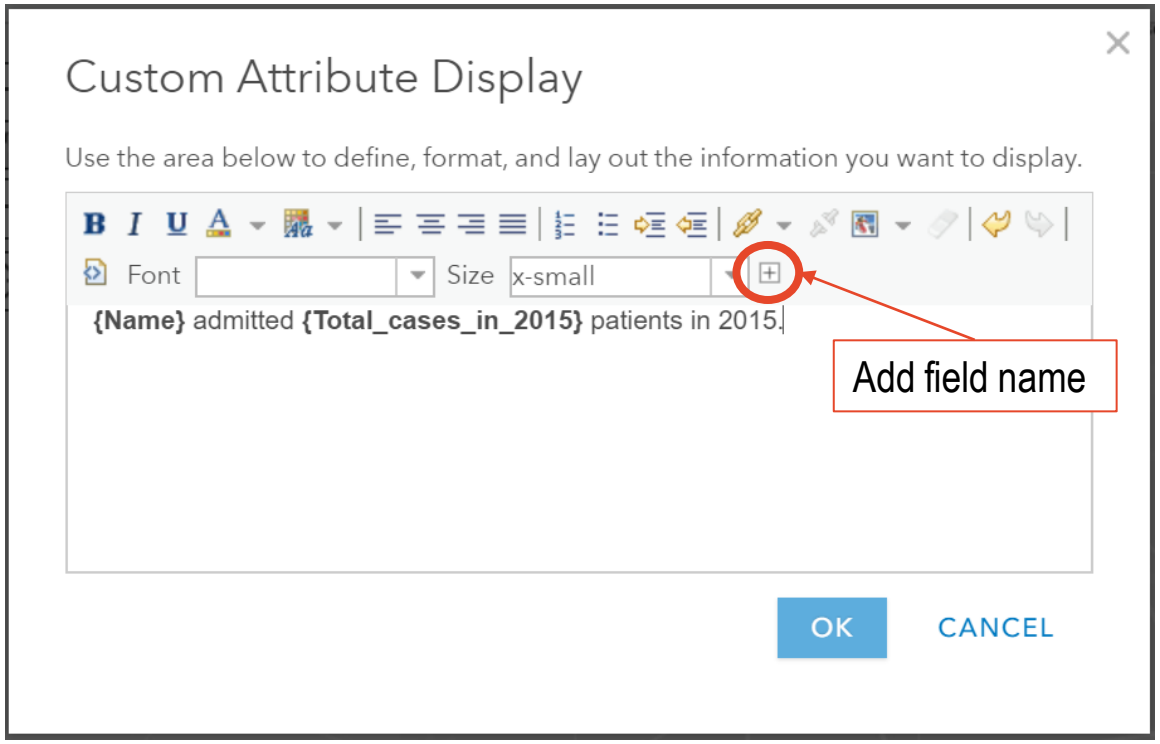
BASEMAPS AND LAYER STYLES

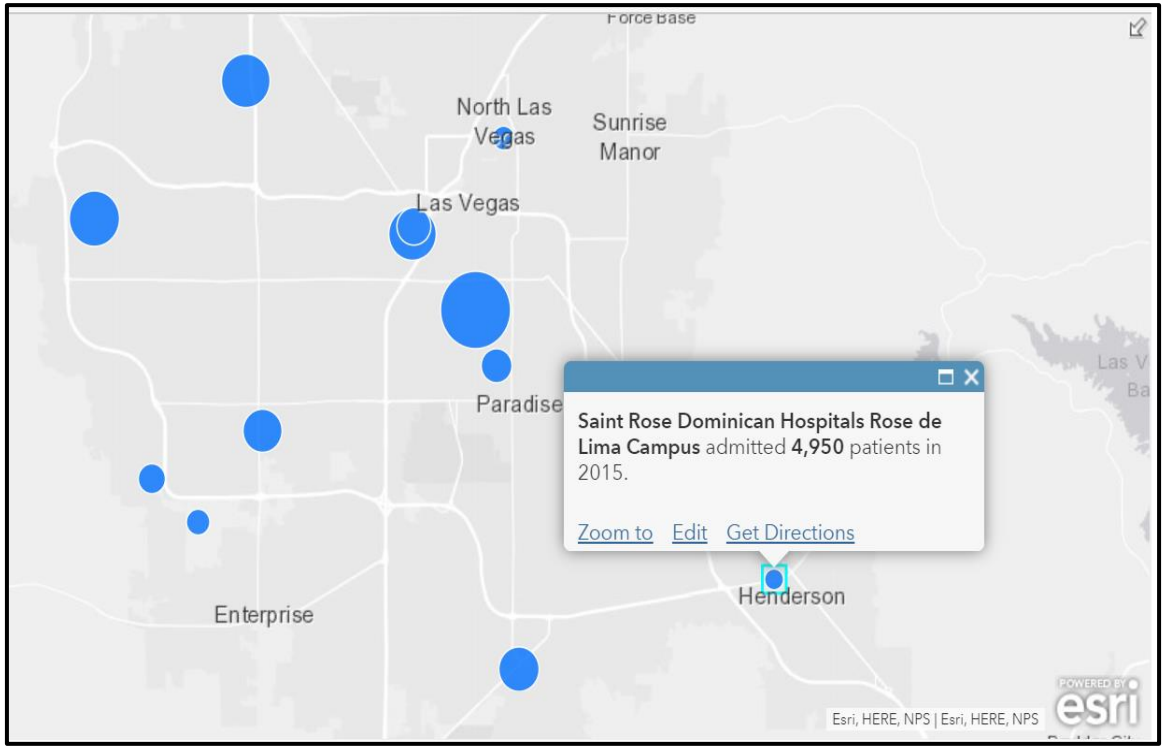
- Different basemaps are available under the “Basemap” tab. Choose a basemap that helps display the data in a meaningful way.
- The style of the map can be changed by different attributes of the data or by drawing style (i.e. counts & amounts, heat map, unique symbols, etc.)
- For this map, change the symbols to a color that makes the data stand out more (#0070FF in this case) and an outline to make different data points more distinguishable.

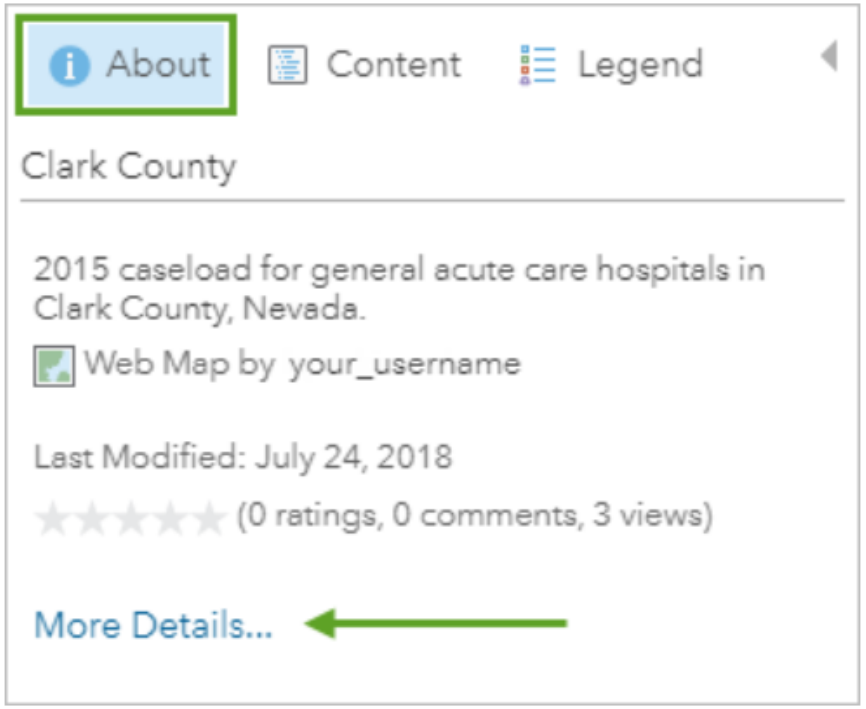


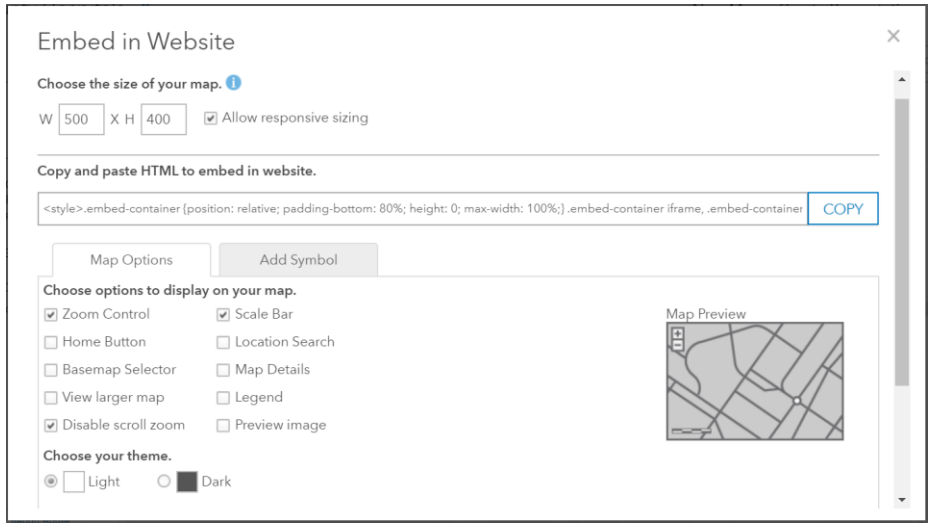
POP-UPS AND TABLES

- The pop-ups in the first map generated will include all of the information available in the data table. Not all of these data are necessary to display or relevant to the meaning of the map.
- To determine which data are most important to display, click “Show Table” button under the Clark County Hospitals layer in the “Contents” pane, look at the data available and decide what would be best in the pop-up, and close the table.
- Then in the “Contents” pane, click the “More Options” button in the Clark County Hospitals layer and select “Configure Pop-up”.
  - Under “Pop-up Contents”, change the display to “a custom attribute display”.
  - In the custom attribute display window, add field names and text to be displayed in the pop-up.
  - On the map, the pop-ups will now show what was entered into the custom attribute display.









SAVING, UPDATING ITEM DETAILS, AND SHARING THE MAP

- To save the map, click “Save” in the menu banner and choose a title for the map
- Add tags when saving to make finding the map easier in the future or for others to search for.
- When the map is saved, a corresponding item page is created and contains a variety of information, options, and settings
  - Click “more details” to open the item page in a new window and fill out missing descriptive info or important attribution, such as giving credit to data providers.
- Lastly, share the map with a group or everyone (public) by clicking “Share”
  - Copy the link to the map to email or send to others to view (ex: https://arcg.is/0XmyvK)
  - You may also choose to embed the map in a website or create a web app

ARCGIS ONLINE

- Overall, learning to use ArcGIS Online was simple for creating general maps of data and information.
- In comparison to other ArcGIS application I have used, ArcGIS Online is the simplest one and does a lot of the work for the user. I would consider ArcGIS Pro a level up from ArcGIS Online in terms of user involvement and then ArcMap or ArcGIS Desktop would be the most involved and depended on knowledge of the user.
- ArcGIS Online does more of the set-up for a map than I expected, such as creating the symbols and styles that it sees as a best fit for your data.
- One drawback to ArcGIS Online itself is that it does not offer as many in-depth functions and data manipulation as higher-level GIS programs.
- ArcGIS Online is a valuable tool that makes data and map sharing online easy and user-friendly.

RESOURCES AND DATASETS

- ArcGIS Online overview: https://www.esri.com/en-us/arcgis/products/arcgis-online/overview
- Get started with ArcGIS Online: https://doc.arcgis.com/en/arcgis-online/get-started/what-is-agol.htm
- ArcGIS Online quick lessons: https://doc.arcgis.com/en/arcgis-online/get-started/online-quick-exercises.htm
- ArcGIS Online create a map: https://learn.arcgis.com/en/projects/create-a-map/
- Clark County Hospitals data: https://www.arcgis.com/home/item.html?id=6c46f3b528849f791d13da687f37e07
- Difference between APIs and SDKs: https://nordicapis.com/what-is-the-difference-between-an-api-and-an-sdk/
- For more tutorials: https://developers.arcgis.com/labs/browse/?product=arcgis-online&topic=any
- Link to my map: https://arcg.is/0XmyvK