

Web Map Application: Sacramento Vegan Spots and Impossible Burger Locations

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GEOG 385

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Purpose:

The "vegan" map app is intended to provide a succinct and informative reference for the type of person who wants to experience these specific types of vegan foods. The target market for this app will be from "vegan millennials" to "vegan senior citizens," who want to follow a more personalized map based on genuine recommendations of favorite restaurants they can visit, rather than just manipulated Yelp reviews. The marketing and functionality appeal of this app are the most important to consider during the data development and web design stages. The datasets may be tailored for the most essential functionality one would need while using an app of this nature.

Data Development:

The first step of the application is to create a new point feature class within a new map project in ArcGIS Pro that will display a collection of restaurants with vegan options that have been highly rated by locals in Downtown Sacramento.

The new point feature class is given the name **vegan**, and the attributes created will be: Name, Address, Impossible Burger {Burger}, Impossible Meat Dish {IM}. The **vegan** fields are all given a data type of text.

The **Locate** tool is used to access the address of each restaurant on the list, then right-click on the address and select **Add to Feature Class** to geocode each address for the points.

The screenshot displays the ArcGIS Pro interface. The main map shows a street view of Sacramento, California, with several red location pins. The 'Contents' pane on the left shows the 'vegan' feature class selected. The 'Locate' tool is active on the right, showing a search for 'Kasbah: 2115 J St, Sacramento, Califo'. Below the map, a table lists the features in the 'vegan' feature class.

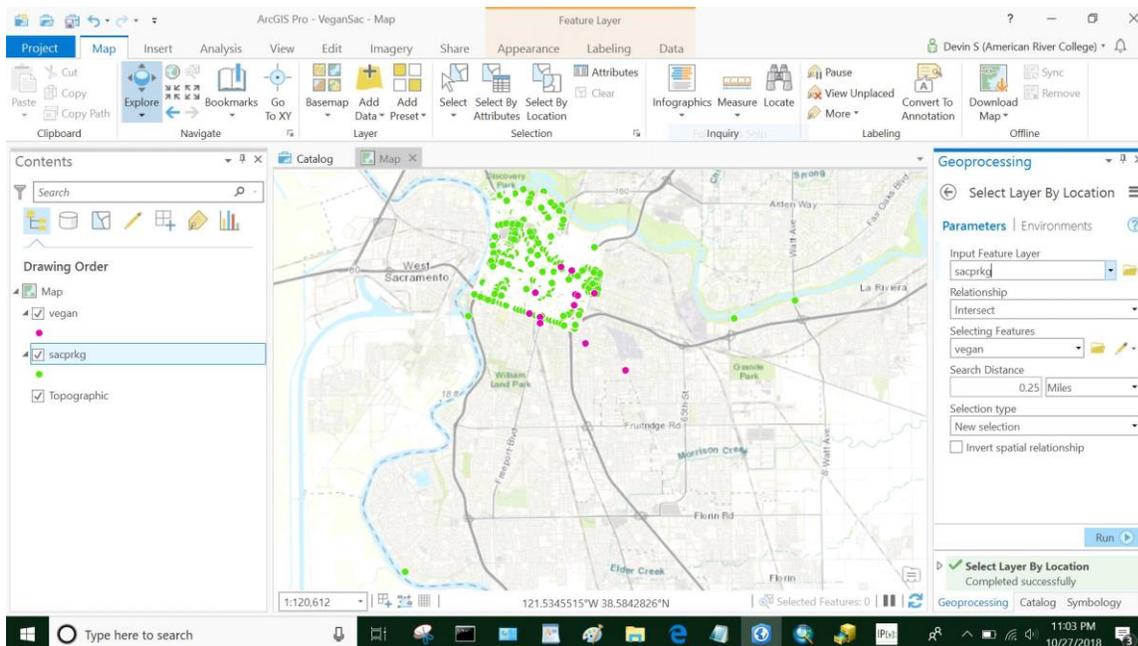
OBJECTID	Shape	Name	Address	Impossible Dish	Impossible Burger	Categ
7	Point	La Venadita	3501 3rd Ave, Sacra...	Yes	No	Mexic
8	Point	Veg Cafe and Bar	2431 J St, Sacramen...	Yes	Yes	Health
9	Point	Revolution Wines	2831 S St, Sacramen...	Yes	Yes	Bistro
10	Point	Queen Sheba	1704 Broadway, Sacr...	No	No	Ethio
11	Point	33rd Street Bistro	3301 Folsom Blvd, S...	Yes	Yes	Bistro
12	Point	Hook and Ladder	1630 S St, Sacramen...	Yes	Yes	Bistro

Next, in the top ribbon of ArcPro select **Edit**, select **vegan** in the **Contents** pane, then select **Create** and open the Attribute Table for **vegan** to fill out the **Impossible Burger** and **Impossible Meat Dish: Yes or No** **Fields** appropriately.

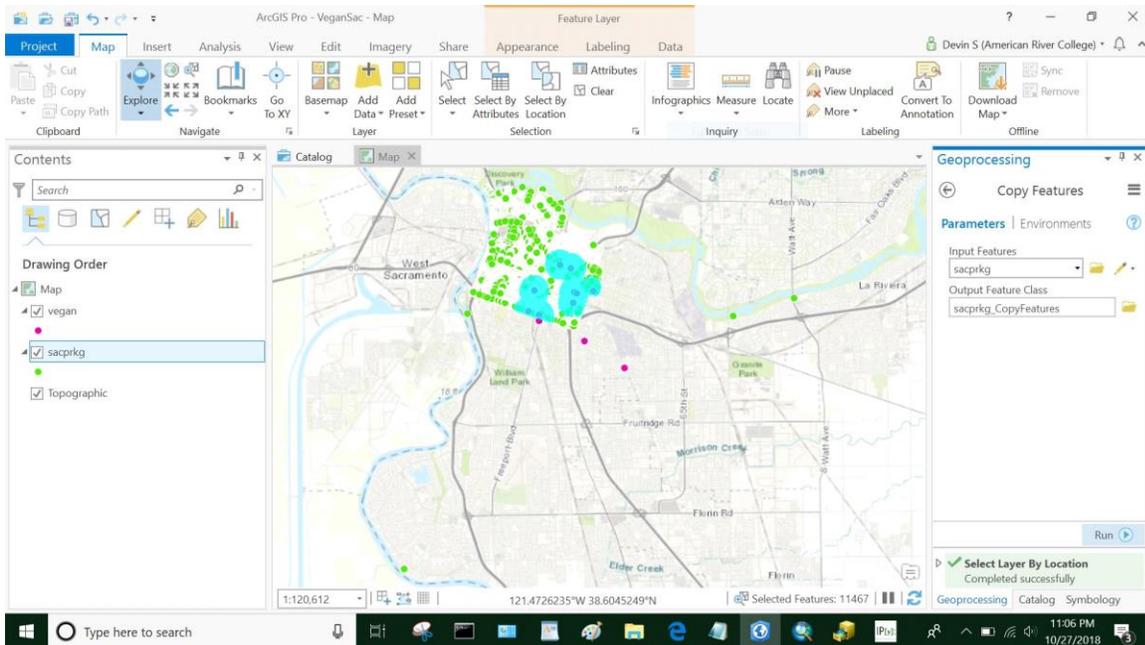
This will provide the necessary data to differentiate available vegan items on the map app in the following web app development steps. Click **Save** in the Edit panel of the top ribbon, to save edits to the **vegan** feature class.

Note: This edit method can be performed through different methods as well.

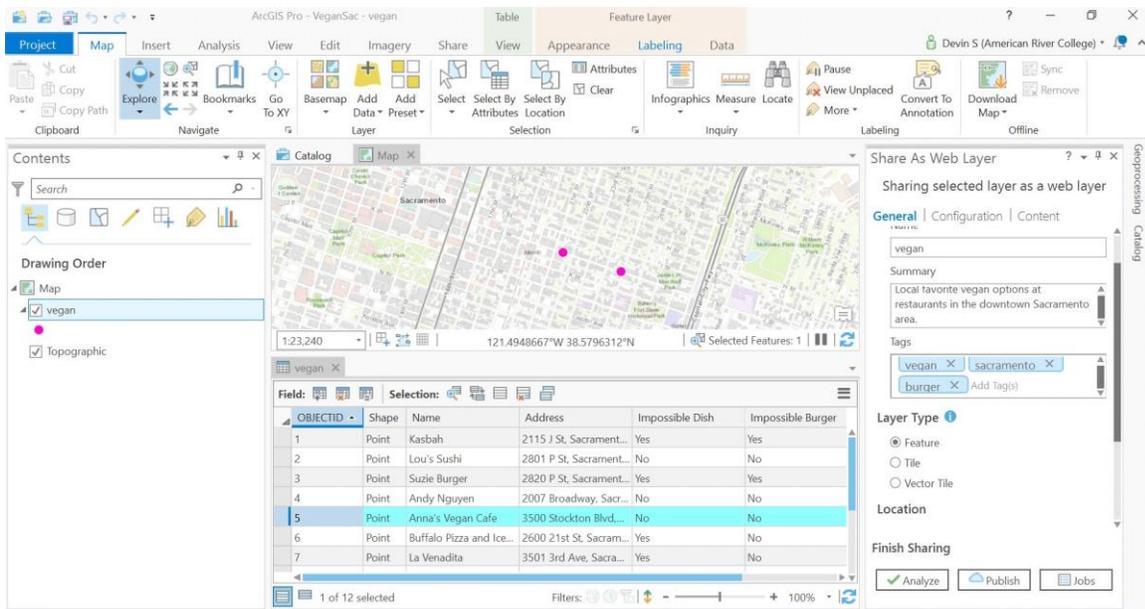
Next, **Add Data** from the the ArcGIS Online Sacramento Parking data source. A new dataset named **ONSTREETPARKING** will appear in **Contents**. Rename it **sacprkg**. Then choose **Select by Location**, and fill out the input conditions as follows below:



Once, the parking spots are highlighted, right-click **sacprkg**, select **Data, Export Data** to the map project geodatabase.



In the following steps, these two layers that were just customized will be shared with ArcGIS Online for further web development. There is no need to style the symbology for **vegan** or **sacprkg** now because that can all be done on the web. Right-click on **vegan** in **Contents**, select **Share**, then **Share as Web Layer**. Enter the tags, summary, sharing discretions, then click **Analyze**. If a 0 red 'x' is returned for the results, then click **Publish**.



Repeat the same steps for the **sacprkg** feature class that were just applied to publishing **vegan** to ArcGIS Online.

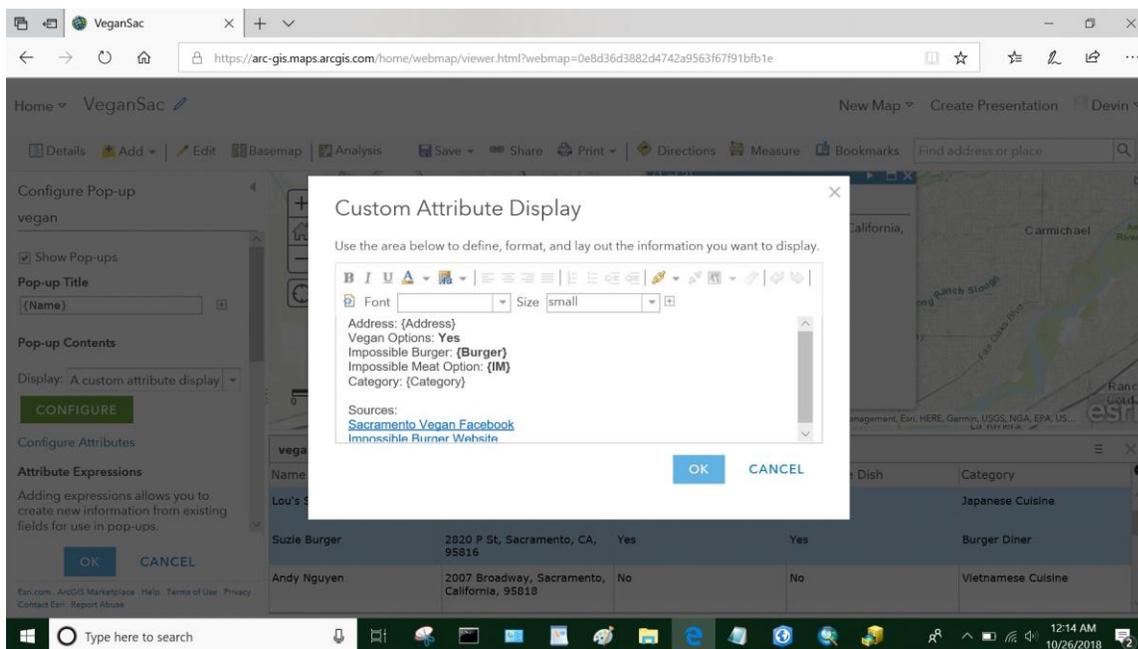
Save, ArcGIS Pro project and then proceed to the Web Development stage.

Web Development:

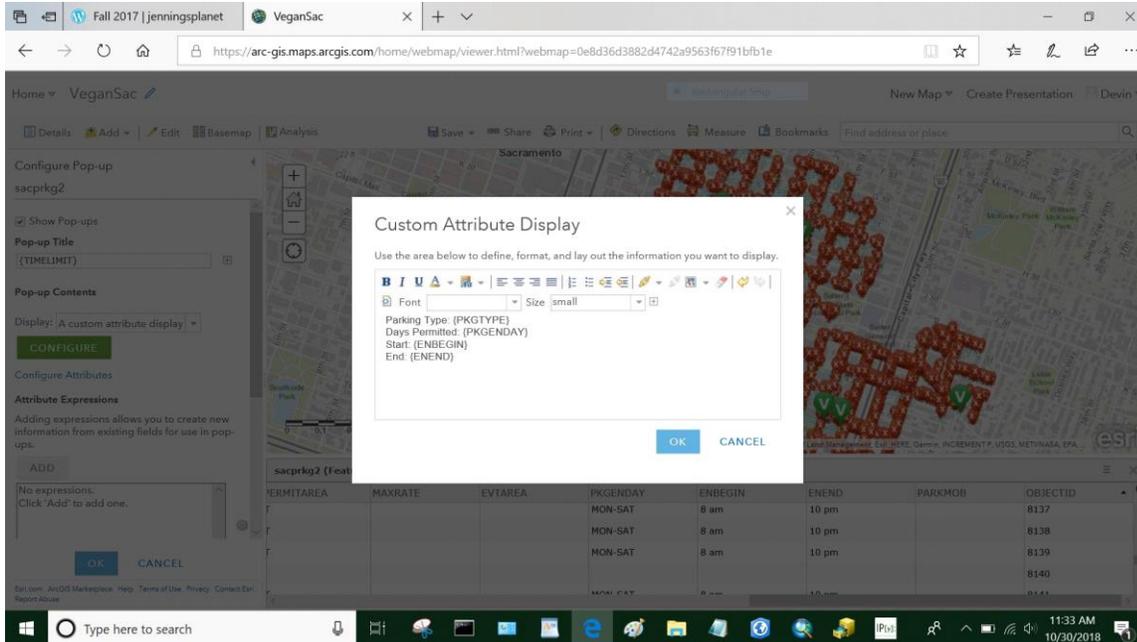
Once signed into ArcGIS Online, select **Content**, then click on the ellipse (...) of the **vegan** feature layer, select **View Item Details**, optionally configure **Enable editor tracking** if one did want to allow the end user to upload data, edit, etc. For the sake of this project, the editor settings will be restricted.

Next, select **Open in Map Viewer** from **vegan**, once in the map view, **Save** map as **VeganSac**, then click **Configure Pop Up** from the ellipse on **vegan** in the **Content Details** pane.

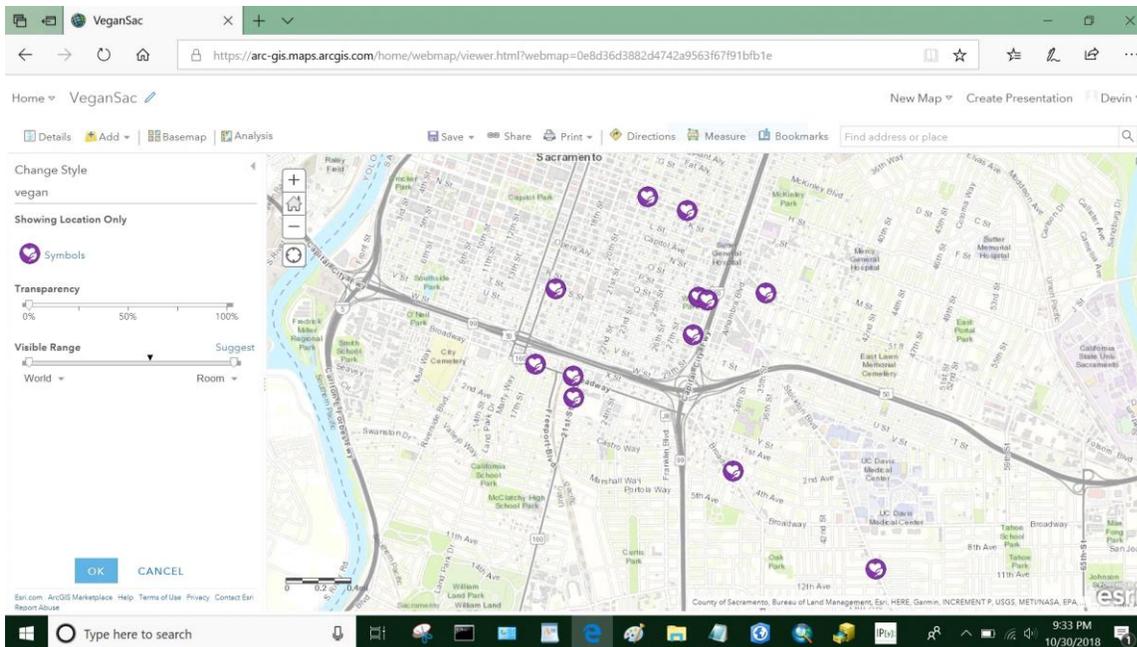
Configure the pop up window by choosing **customize attribute display**, and then fill out each attribute to display appropriately, as shown below:



Next, add **sacparking** and click on **Configure Pop Up** and choose **customize attribute display**, as well, then fill out each attribute to display appropriately.

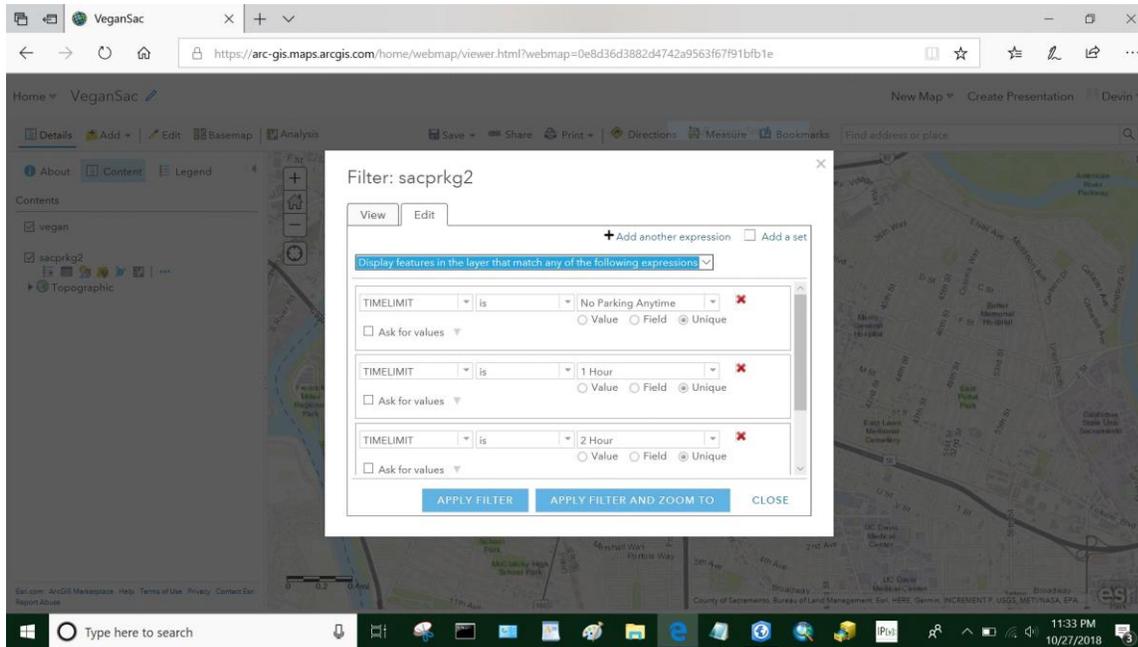


Select **Choose Style** on **vegan** and **sacparking** to change the symbology for each layer as shown below:



For **sacparking**, the symbology for No Parking Anytime, 1 hour, and 2 hour were the only attributes that were changed because a filter would be applied, that would only display these necessary attributes in

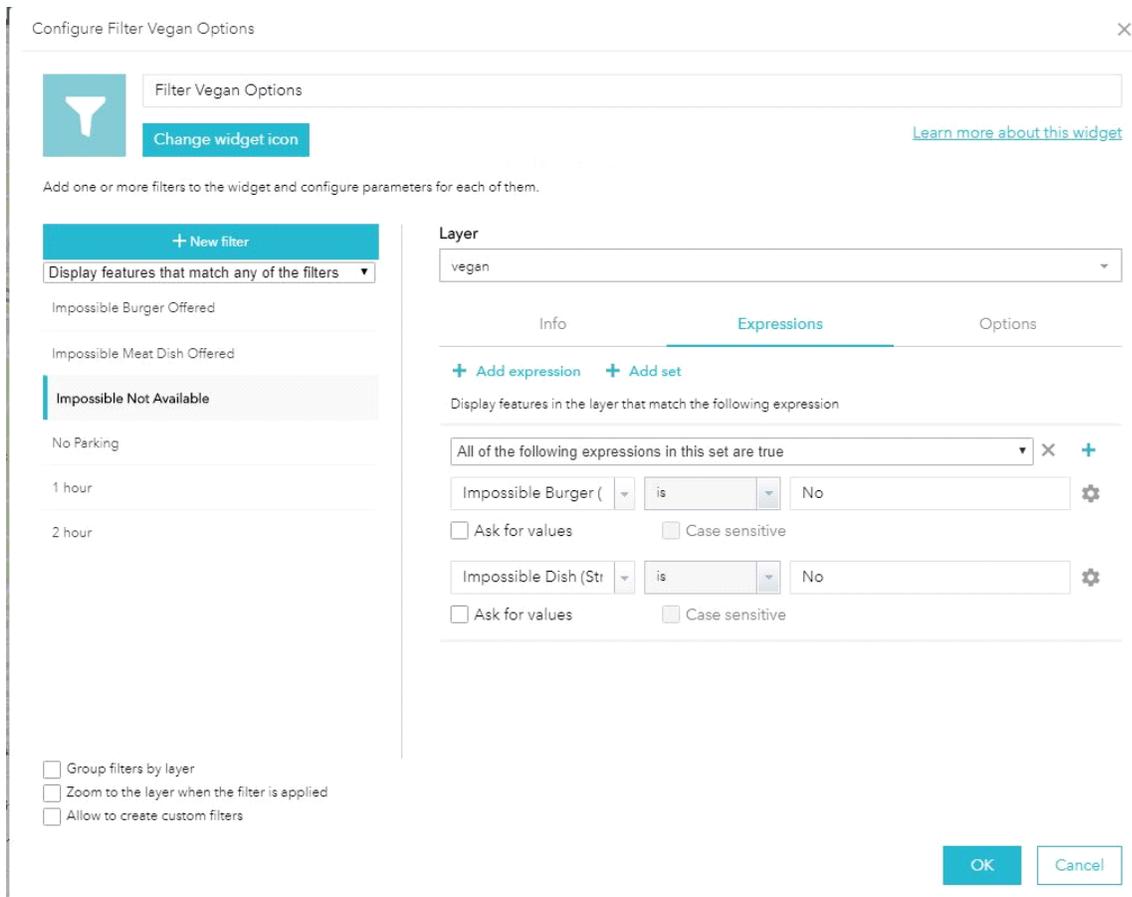
the web app as follows:



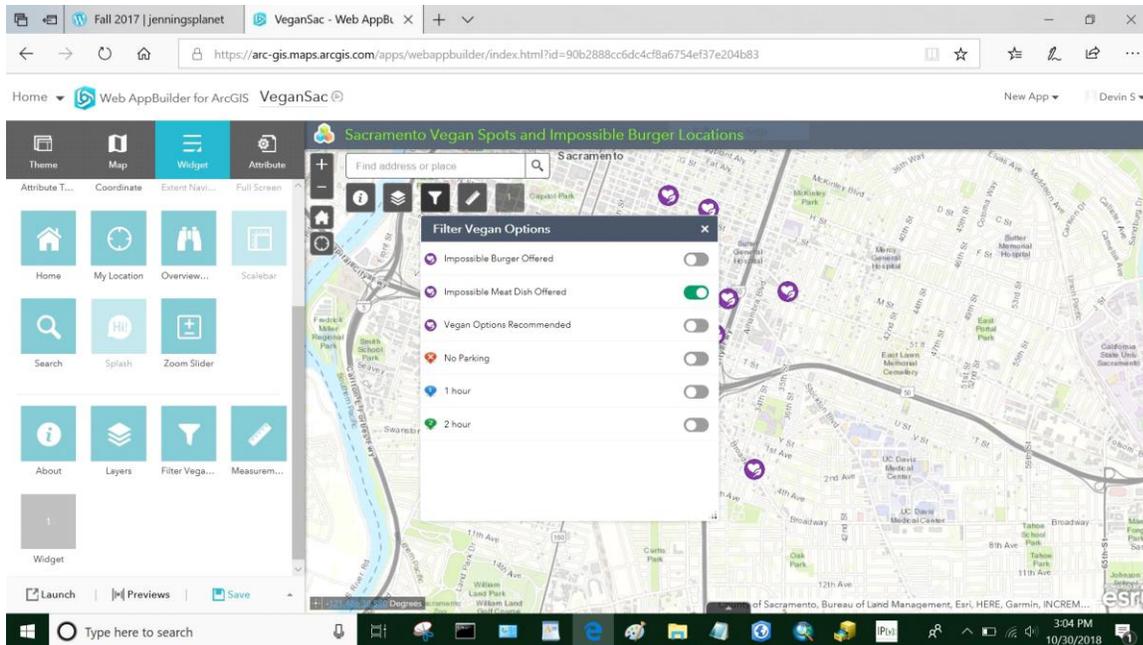
Save the **VeganSac** web map, select **Share**, then select **Create a Web App** to move onto the next Web App Development stage.

Web App Development:

The first task in the Web Appbuilder is to add and configure the **Filter** widget to display only the restaurants offering the Impossible Burger, an Impossible Meat Option or the locations that have **no** Impossible Meat option whatsoever. The filter expressions that display vegan spots **not** offering the Impossible option altogether will be written as a set instead of individual expressions because both must be true for this action to display correctly:



The **About** widget will also be included with a brief synopsis, disclaimer and relevant links, so the end user can gain an overview of what this app offers as well as helpful websites to guide their adventure through "word-of-mouth" on social media platforms:



The **Layers** widget will be configured to restrict all accessibility to be limited to Zoom To only. Since the attribute tables can be accessed in the bottom ribbon of the app, it's redundant to keep the option to view the tables in the Layers widget also.

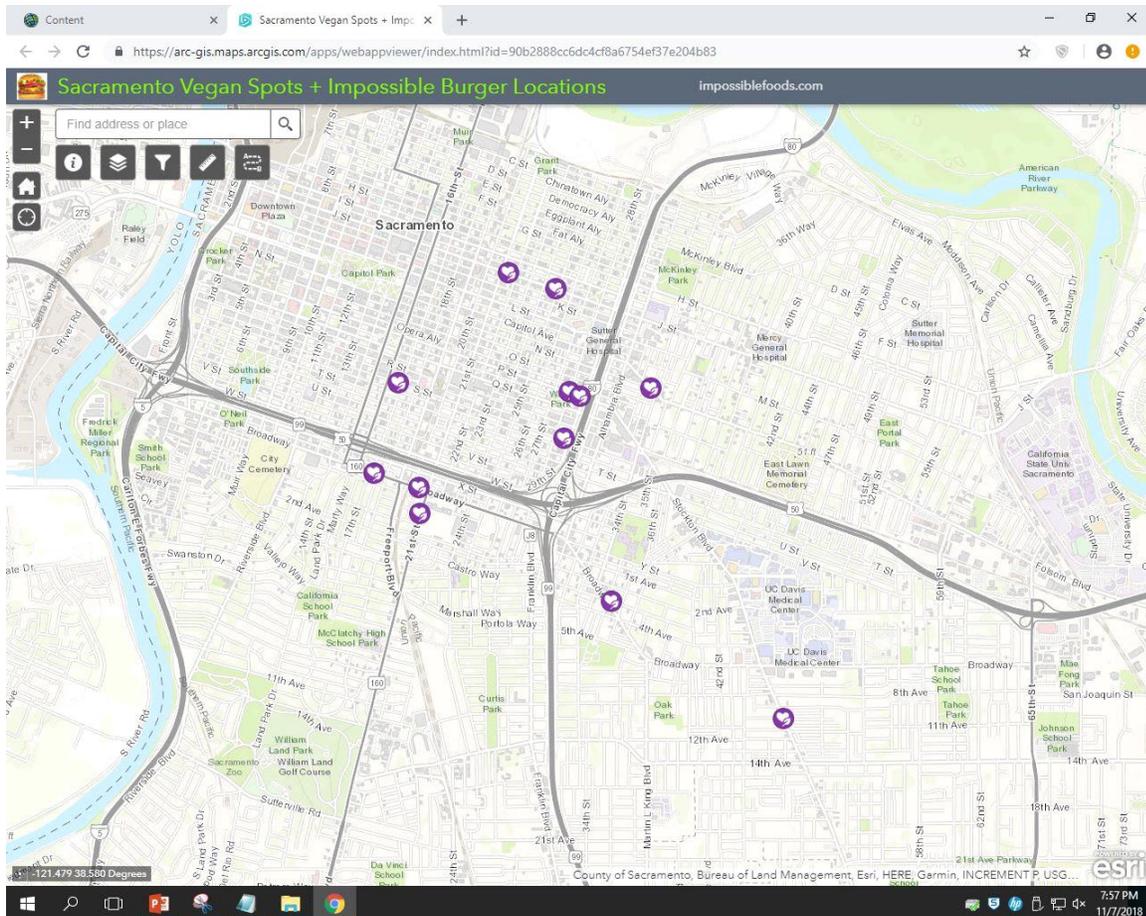
While designing the order at which the widgets will be displayed, I considered the priority order that each user would use as primary and secondary tools. For example, I placed the **About** and **Layers** widget towards the beginning so they can view the app info and so the user can turn off the parking layer immediately if they had just opened the app and only wanted to view the restaurants first. These factors are important while being conscientious of design elements.

The **Measurement** widget will be added to consider the users who might want to "restaurant hop" or have family visiting for a limited time that same day and want to see how far each venue is located in relation to each other.

The **Directions** widget will also be added if users select a restaurant's pop up, the ellipse will offer a directions option within the pop up itself, or the user can click on the **Directions** widget to find routes to the different restaurants:

Change the title of the app by selecting **Attributes** in AGOL Appbuilder and configuring the text for the fields that appear in the final web map application.

The app will be **Saved** and then **Launched** to view its operability as a marketing test product. Further editing may be required and then launched as a final web application for users to enjoy.



Challenges:

A moderate amount of challenges occurred during this project. There were times when I was hesitant to deploy a few analysis tools that I was concerned might burn credits from the organization. This led me to conduct most of the laborious processing within ArcGIS Pro. Another dilemma was stylizing the symbology for the parking spaces available into a warm or cool color theme. Or just keep each unique value as a qualitative primary color. The result was keeping the symbology for parking as red, green, blue, which is neither a warm or cool theme for colors but clear and easy to differentiate to the user. I also wanted to configure a pop-up feature that would display a Google Maps link that would lead the user to that restaurant address selected if they had clicked on it. However, the path name would have had to include the (lat,long) coordinates in addition to the name of the restaurant in the sequence and was unable to include that factor into the Name field. Considering the psychographics of how the user thinks was one reason I omitted the use of certain widgets that the user may have thought were unnecessary while using it. The app is designed to be informative, but not so much interactive. The app is designed for vegans or people who want to try plant-based foods, but not everyone will value it as a tool. For instance, some vegans will most likely scrutinize the app for its specific collection of restaurants that were chosen since some hardcore vegans tend to be hyper-opinionated on social media platforms.

Conclusion:

Several new learning experiences were encountered during the design of this app. Processing and spatial queries seemed more flexible to perform in ArcGIS Pro than in AGOL. I would have included a field in the **vegan** feature class that would have provided links to that restaurant's website in future map app design projects. I also would have made the field widths much smaller when I was creating new fields for **vegan**. If this were a project for a marketing campaign, I would have enabled the user to update the restaurant features with photos and comments about their unique experiences in order to gain user insight and surveys, much like Yelp. There are many nuances that play a major role in the construction of web map applications. Overall this project led me to realize the powerful spatial communication potential these applications can represent and achieve, when used by clients or the public.