MULTIPLE MAP LAYERS

This was a feature that was introduced in **Tableau 2020.4** for boosting **geospatial analysis**

With this new multiple marks layers feature we can add an unlimited number of layers to the map
This means we can visualize multiple sets of location data in context of one another, and there's no need for external tools to build custom background maps

This allows us to overlay multiple marks layers on a map with no hard limit to the number of layers that can be used

MULTIPLE MAP LAYERS

Marks layers can be used only with **geographic data**

Fields can be shared between marks layers, but any filters that you apply to a field will apply to all marks layers

We will make use of Superstore data set to create three map layers

Layer 1 is for **State** using a **Map** mark type where **Sales** is used as the measure

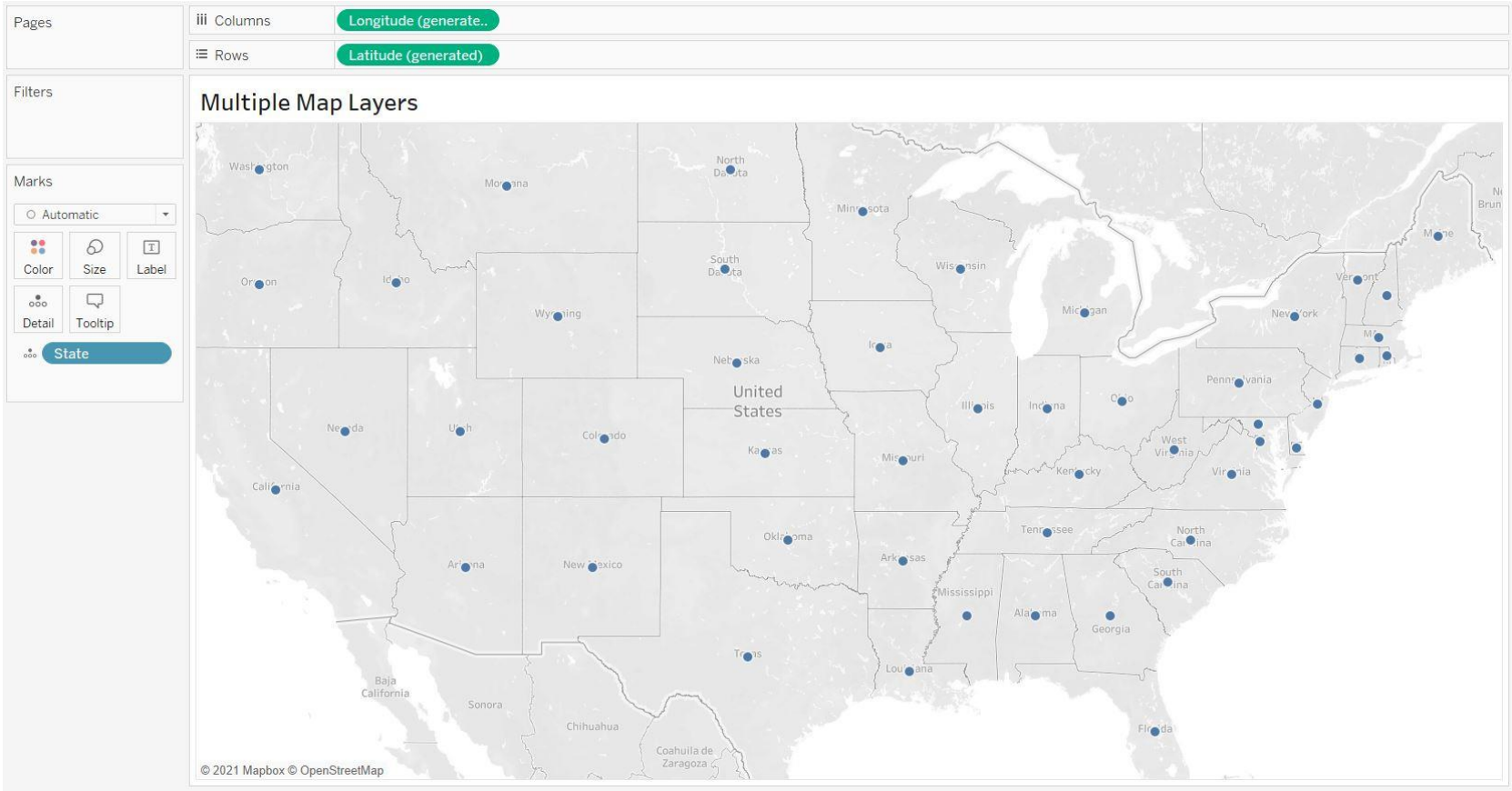
Layer 2 is for **City** using a **Circle** mark type where **Quantity** is used as the measure

Layer 3 is for **Postal Code** using a **Shape** mark type where **Profit** is used as the measure

STEPS TO CREATE MAP LAYERS

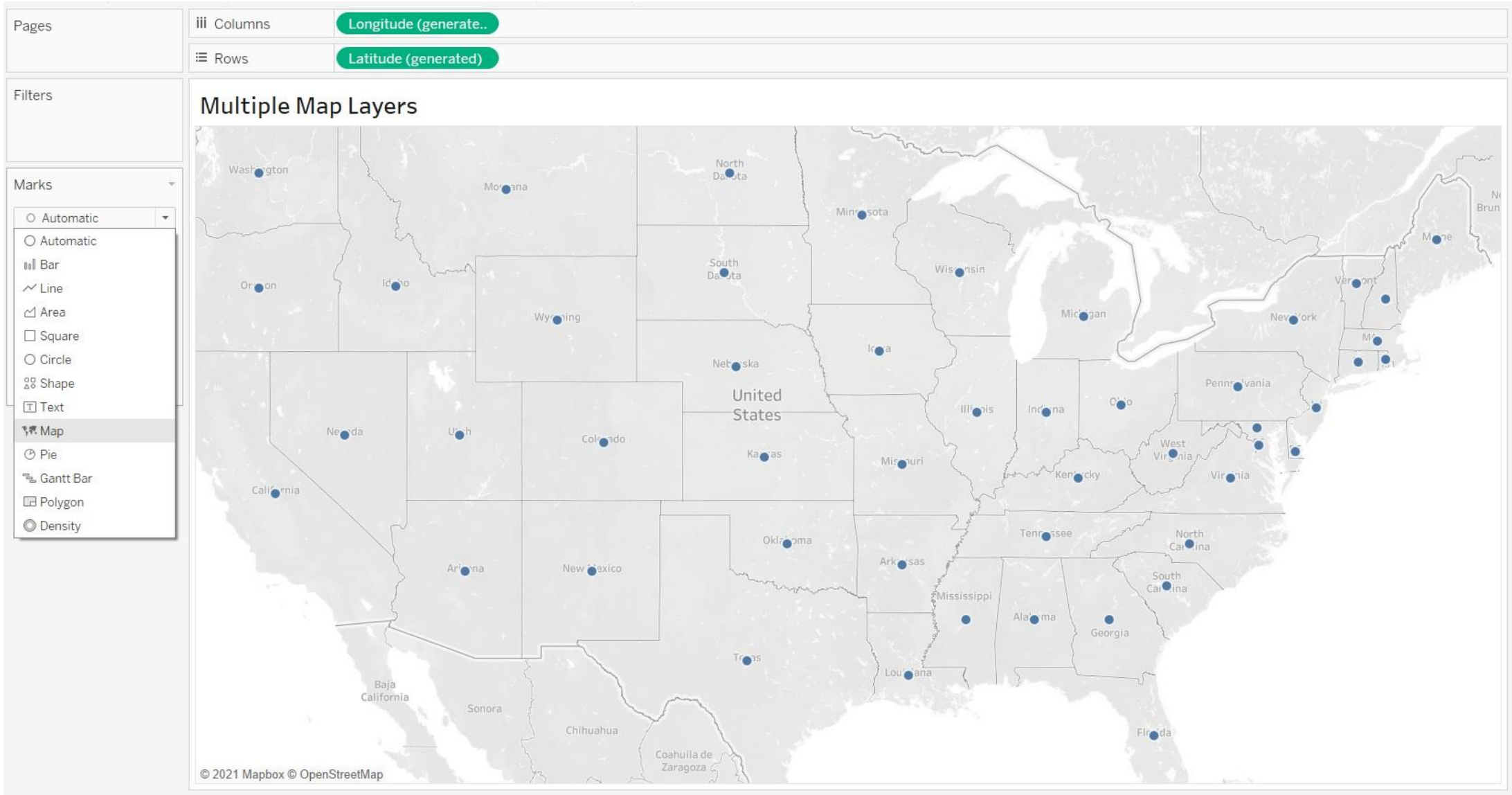
Step 1: Let us start with the below mentioned Viz

Rows Shelf: Latitude
Columns Shelf: Longitude
Detail on Marks Card: State



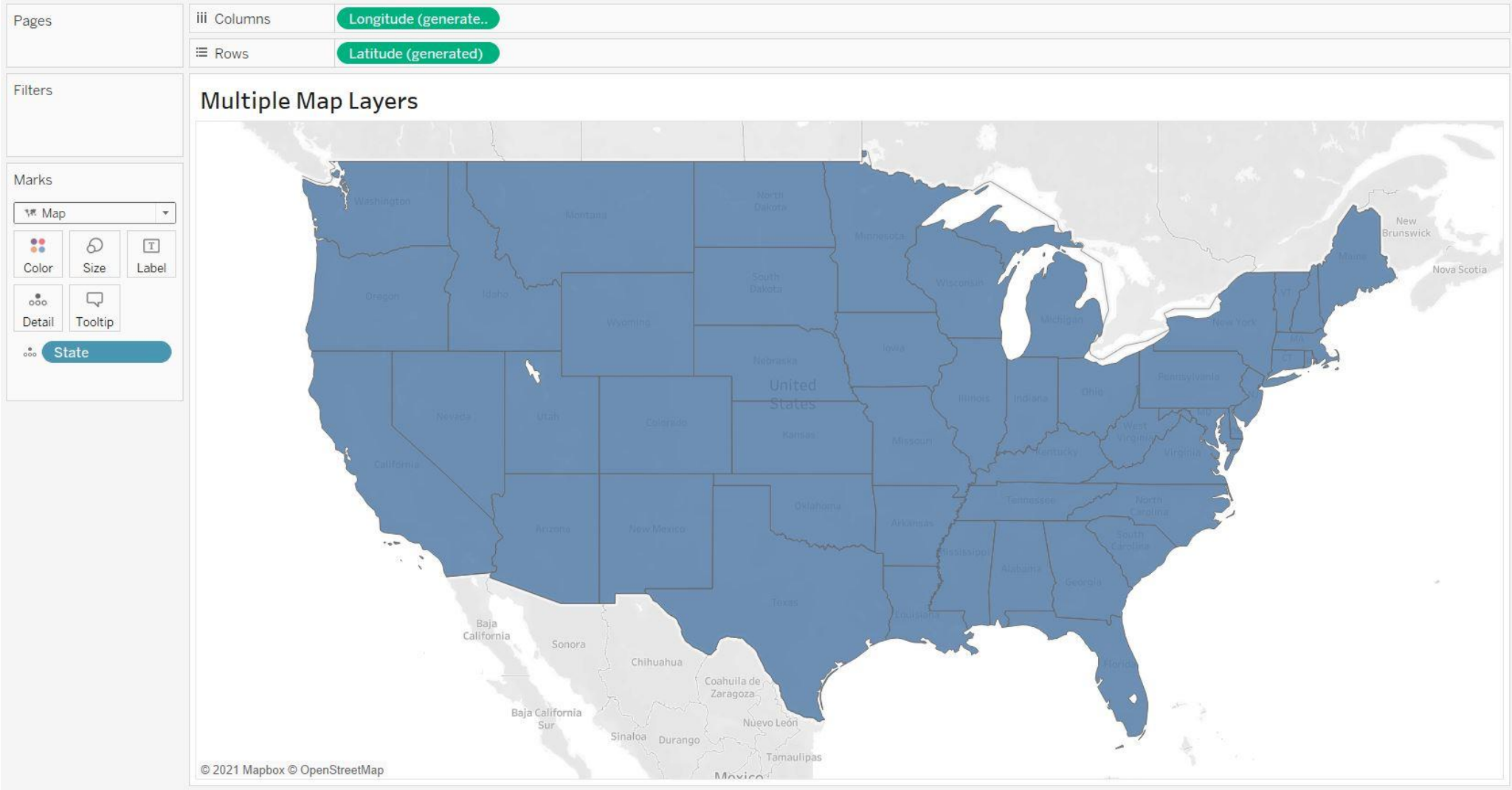
STEPS TO CREATE MAP LAYERS

Step 2: Change the **Mark** type to **Map**



STEPS TO CREATE MAP LAYERS

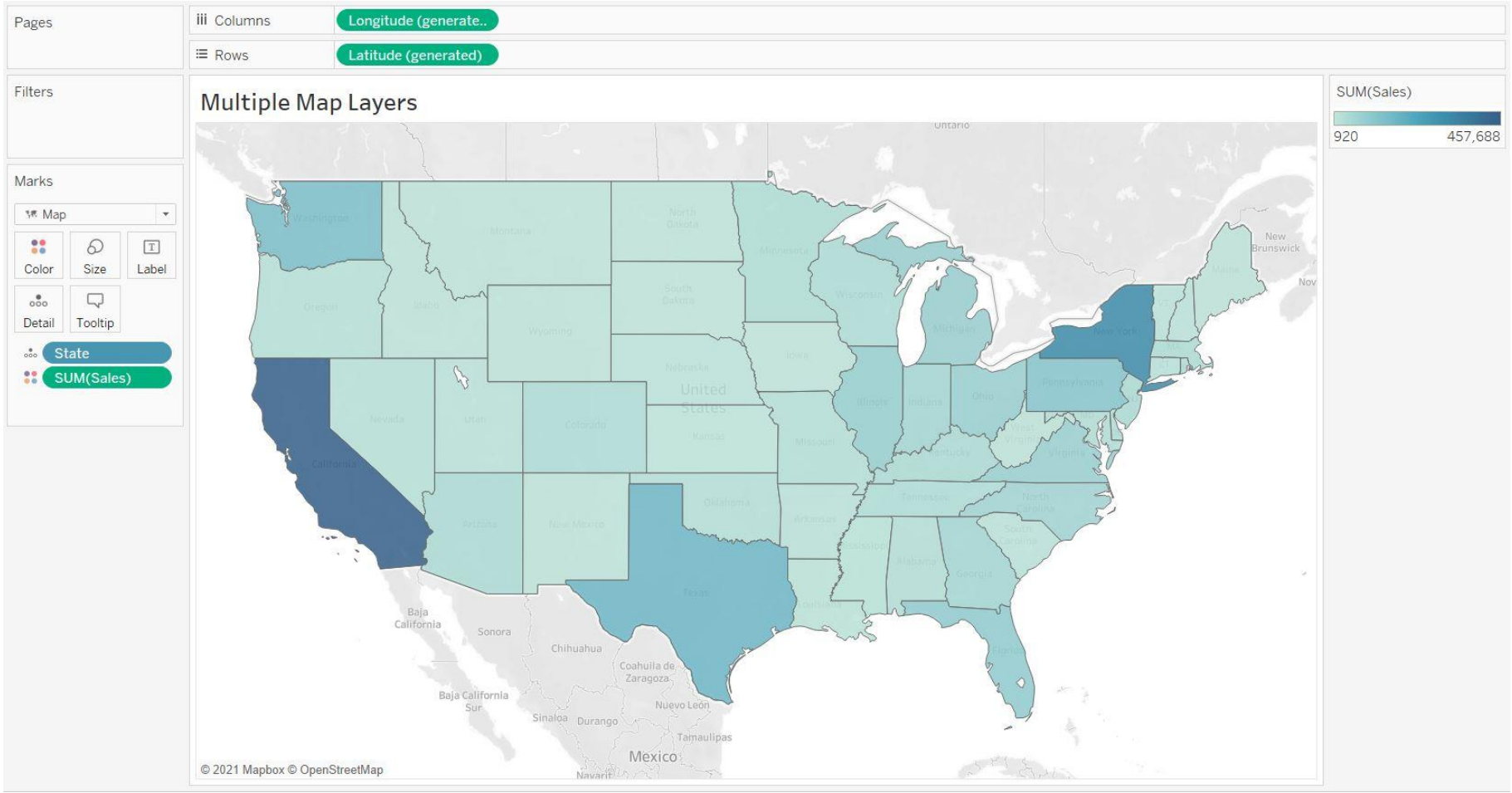
Step 3: The Viz is now a filled Map



STEPS TO CREATE MAP LAYERS

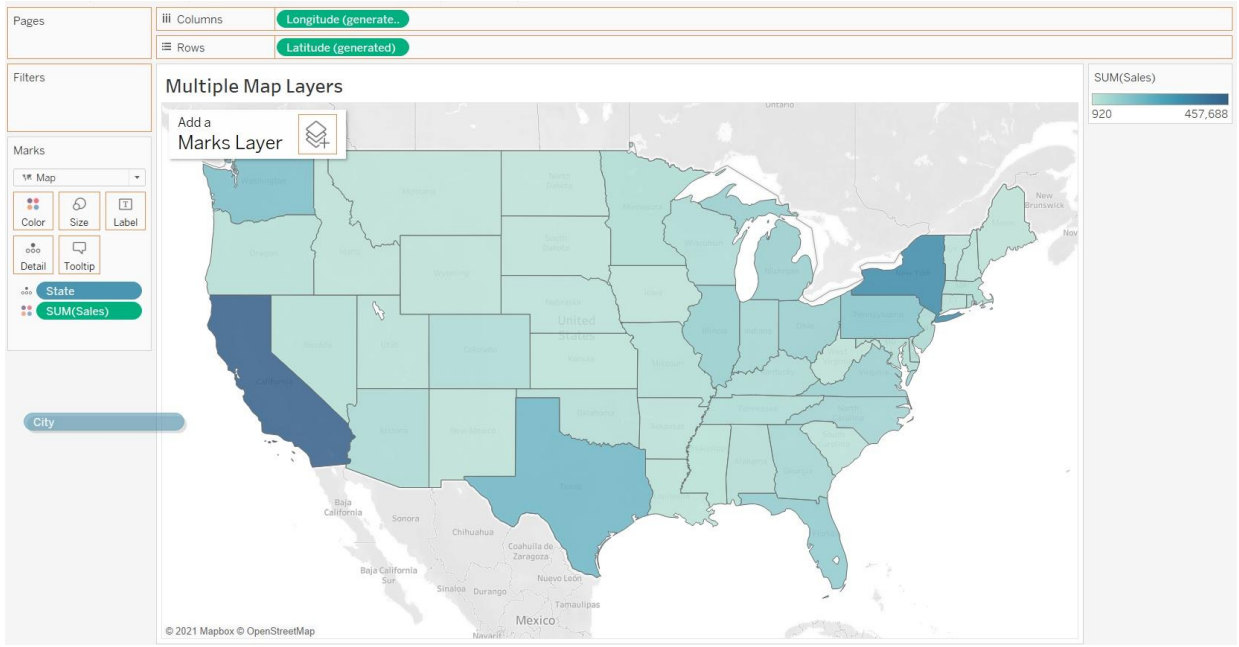
Step 4: Drag and drop **Sales** measure to **Color** on **Marks** card

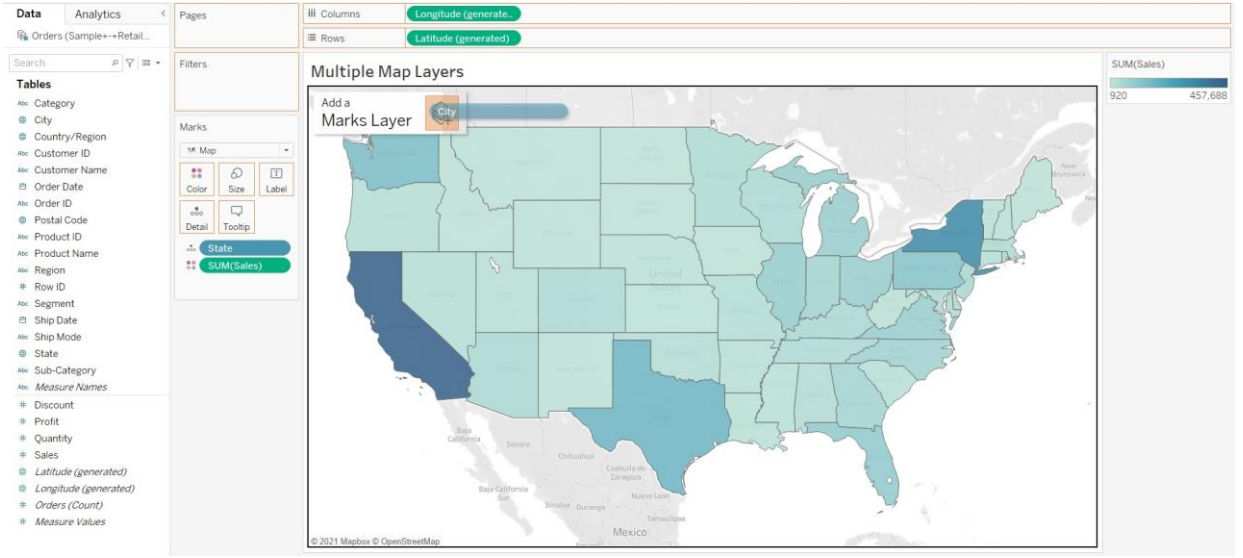
The States with darker color have greater sales and State with lighter color have lesser sales



STEPS TO CREATE MAP LAYERS

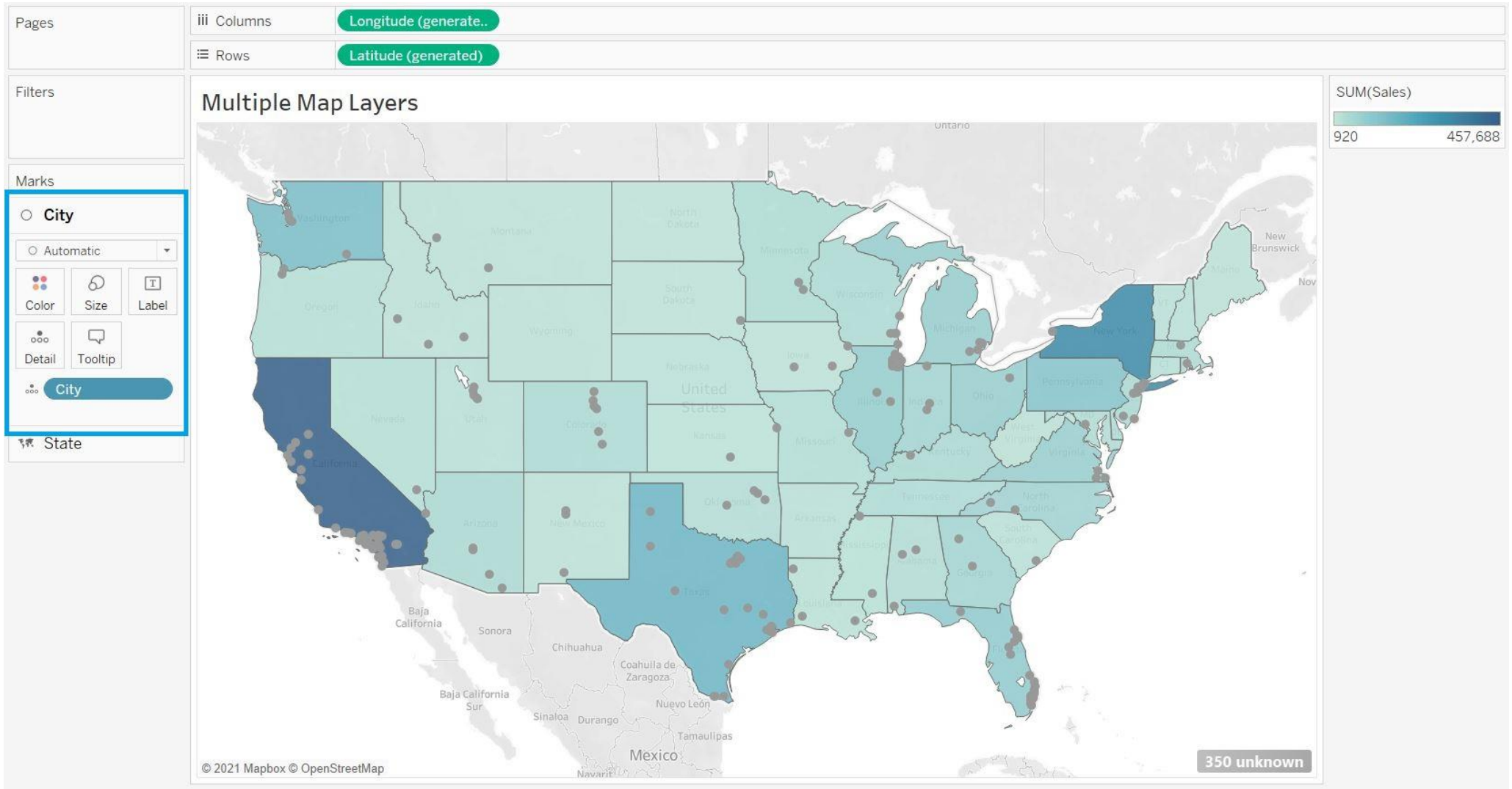
Step 5: This is the step where we need to make use of the Map Layers functionality Drag the **City** into the view. Notice the **Add a Marks Layer** control becomes available in the top left corner of the view. Drop the **City** on the **Add a Marks Layer** control.





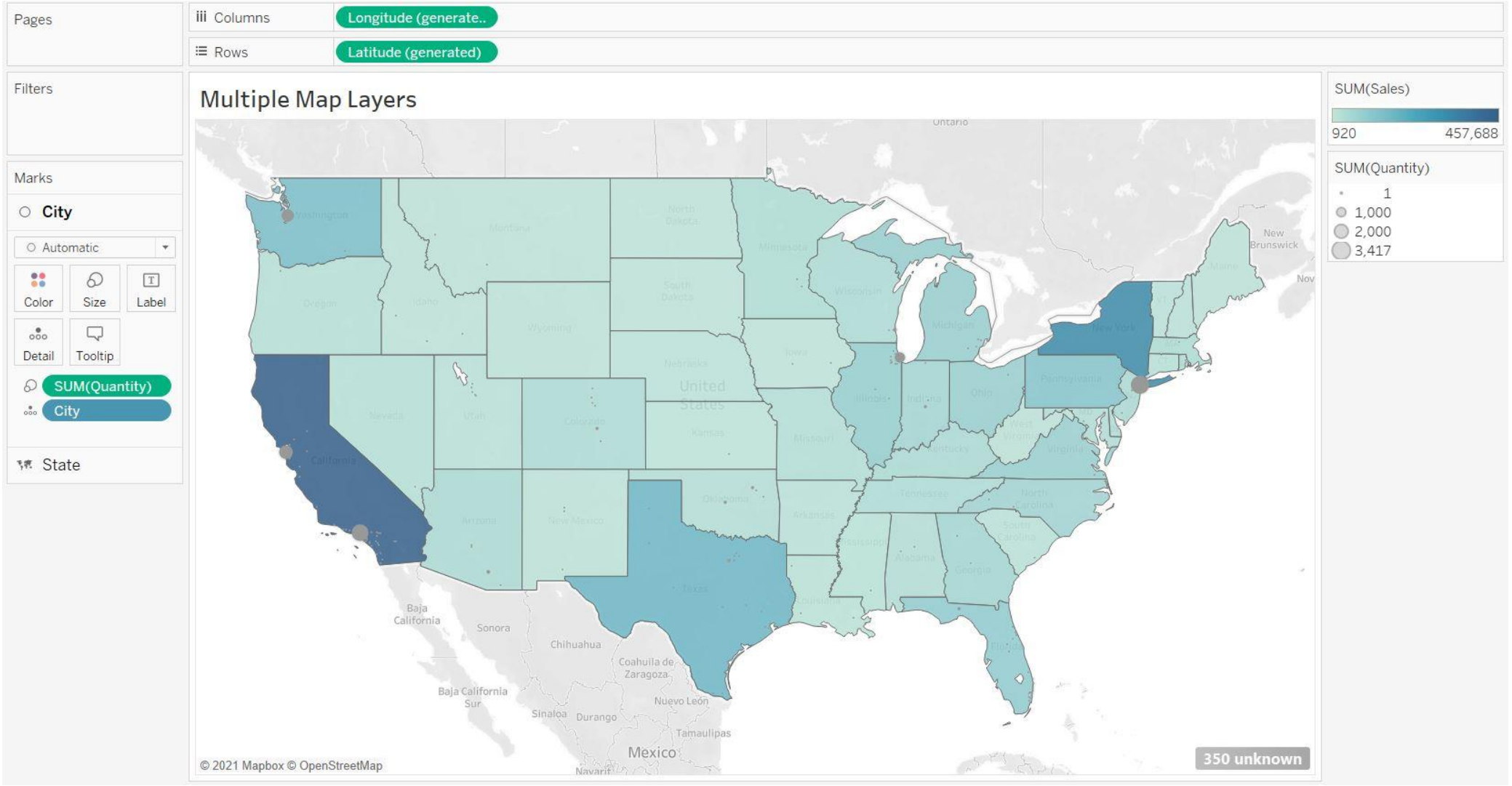
STEPS TO CREATE MAP LAYERS

Step 6: A new marks layer is added for **City** and the layer is displayed in the view.
All cities have the same size



STEPS TO CREATE MAP LAYERS

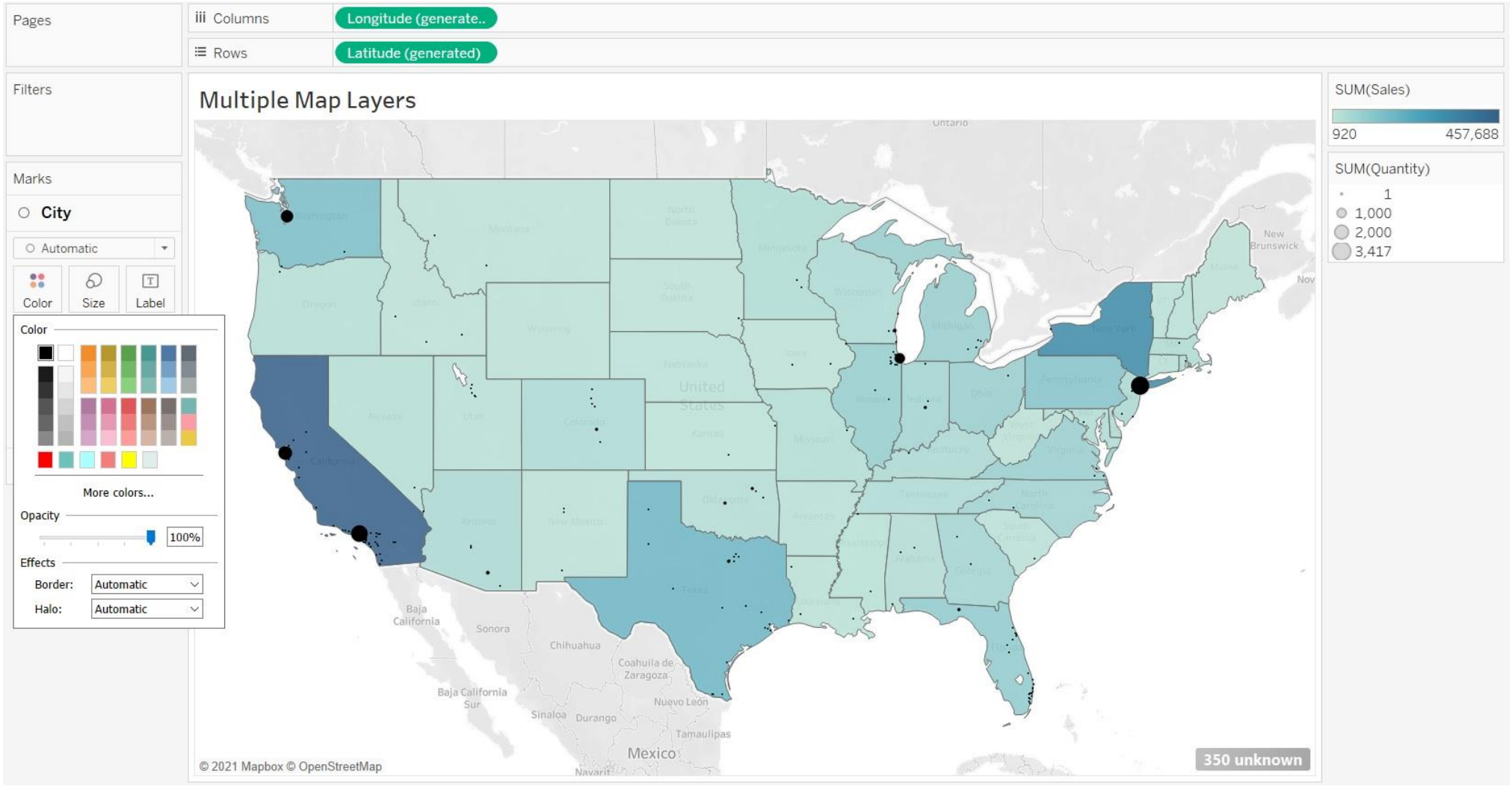
Step 7: Drag and drop **Quantity** measure to **Size** on **Marks** card



STEPS TO CREATE MAP LAYERS

Step 8: Change the Color of the marks

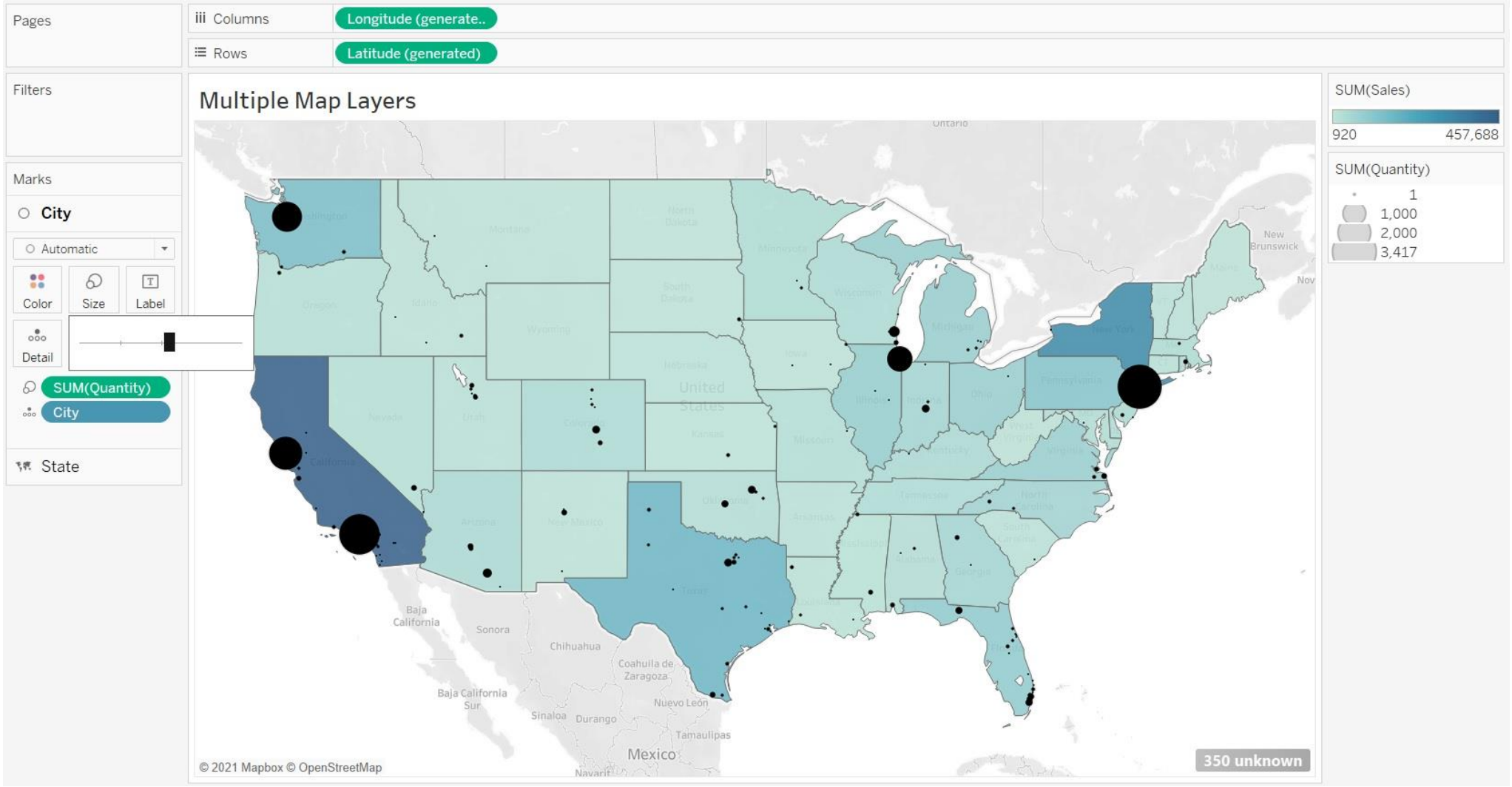
On the **Marks** card, click **Color**, and then select the required color



STEPS TO CREATE MAP LAYERS

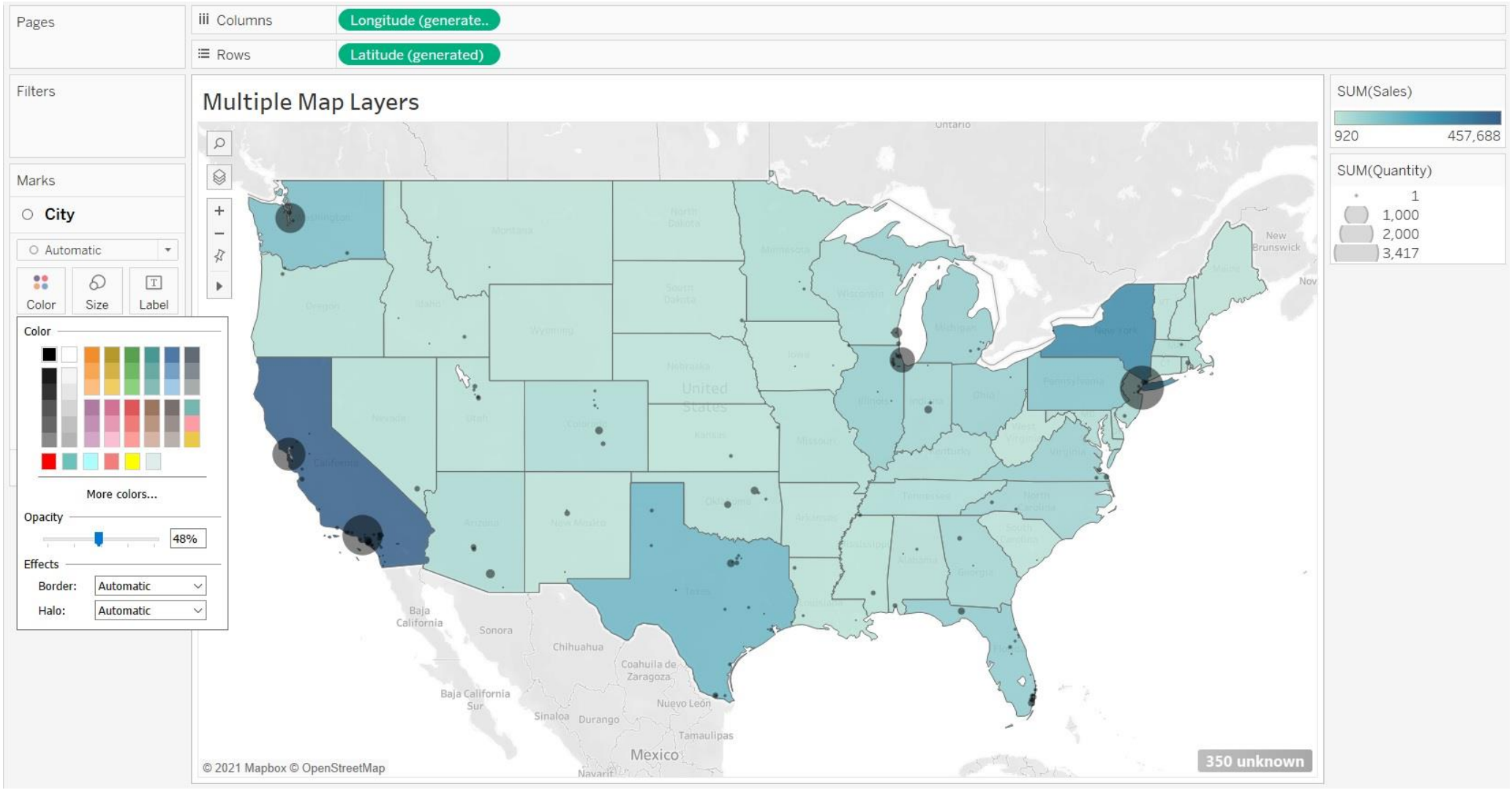
Step 9: Adjust the Size of the marks

On the **Marks** card, click **Size**, and then move the slider to the left or right



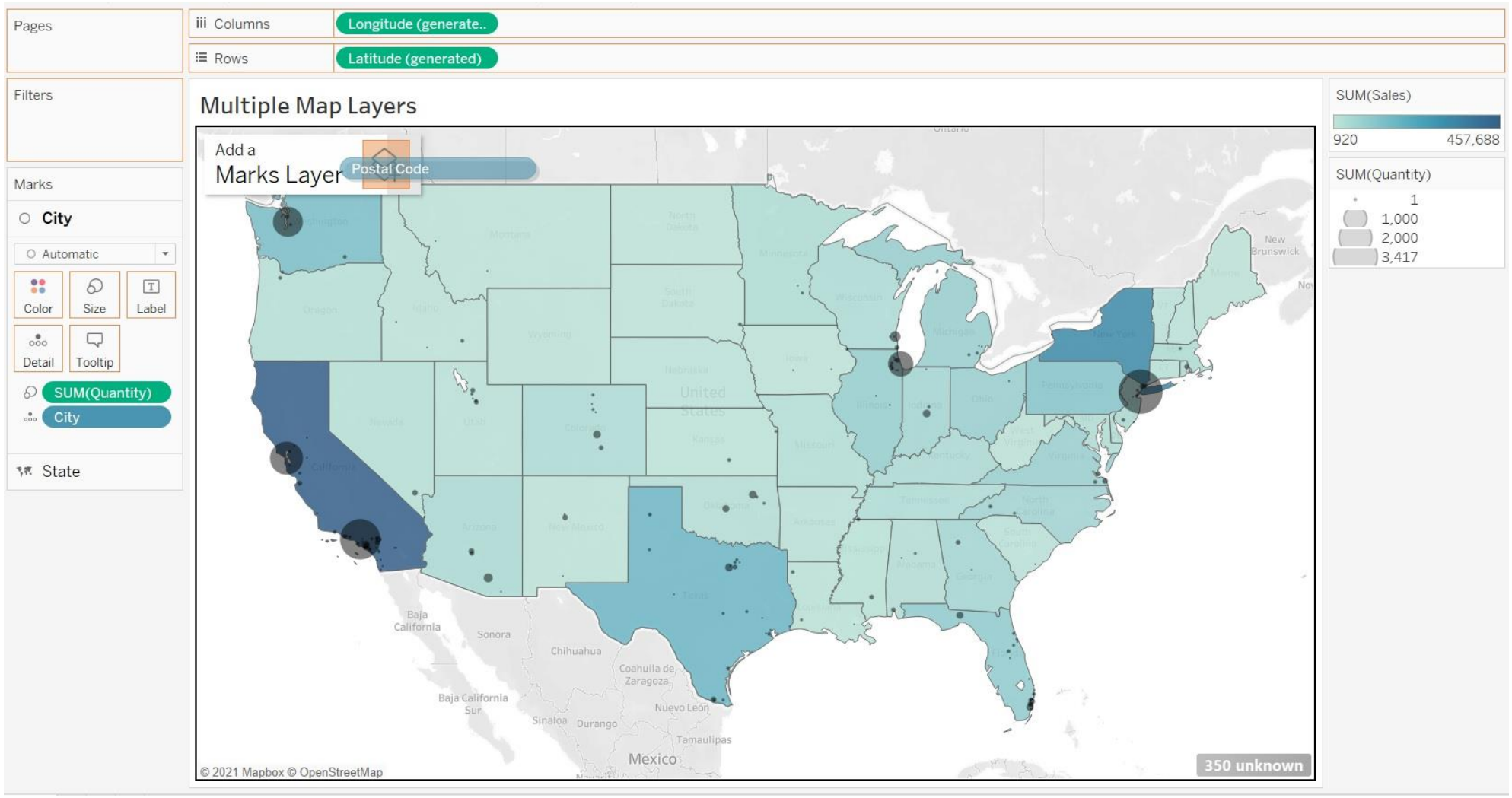
STEPS TO CREATE MAP LAYERS

Step 10: Adjust the transparency of the marks



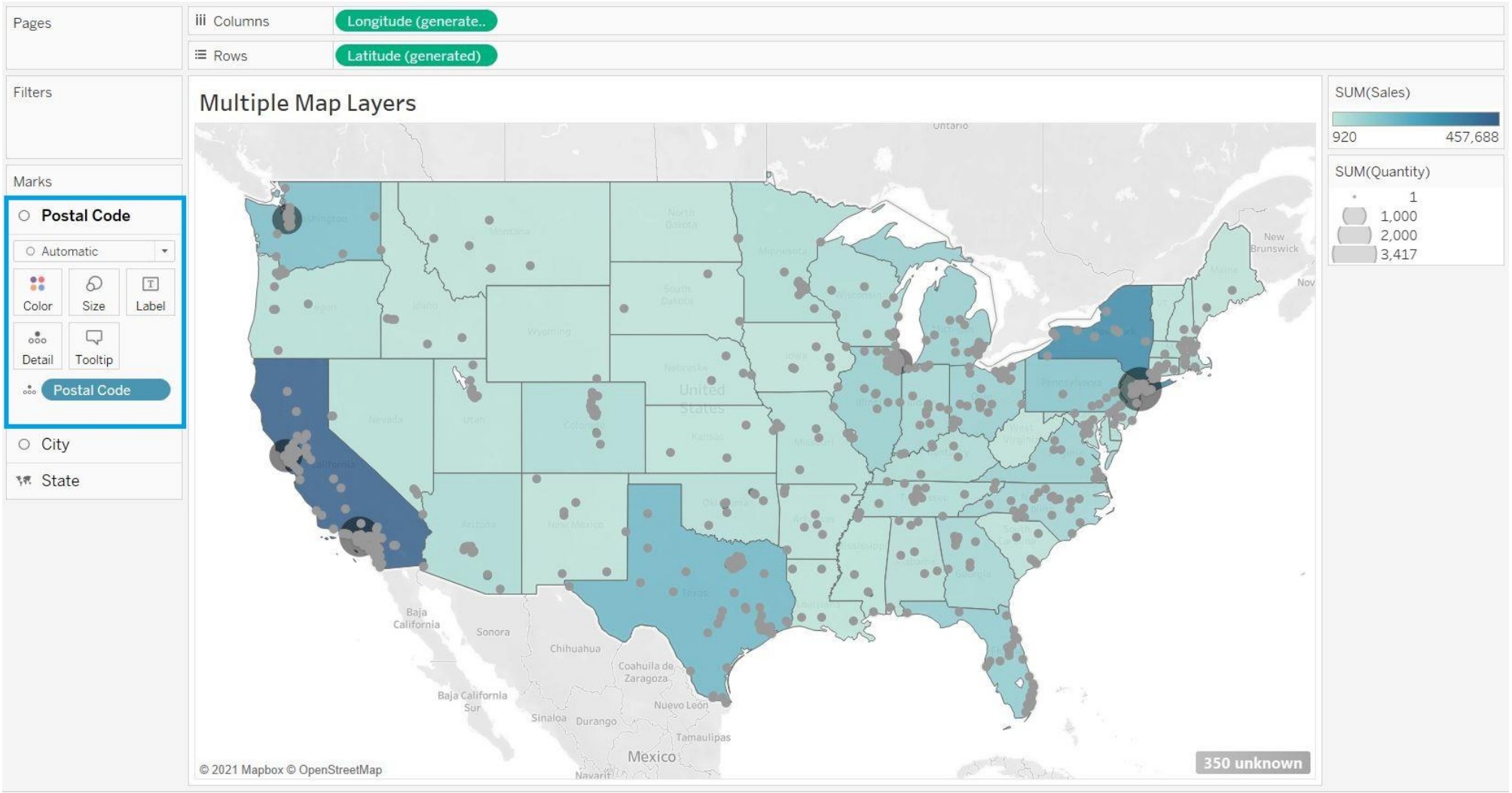
STEPS TO CREATE MAP LAYERS

Step 11: Drop the **Postal Code** on the **Add a Marks Layer** control



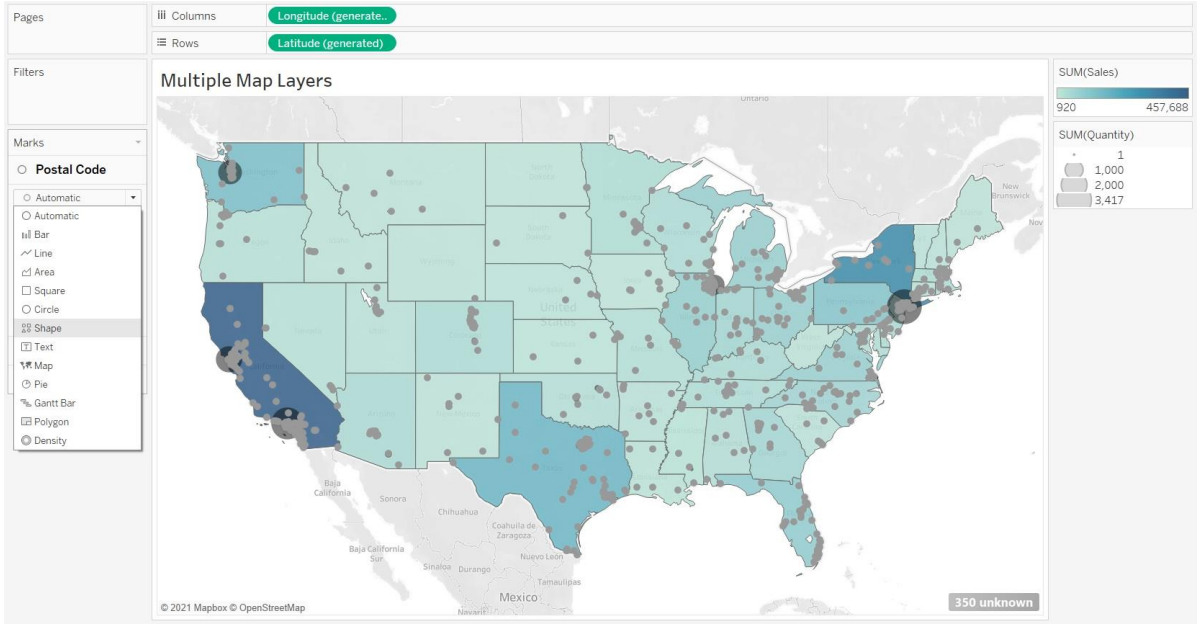
STEPS TO CREATE MAP LAYERS

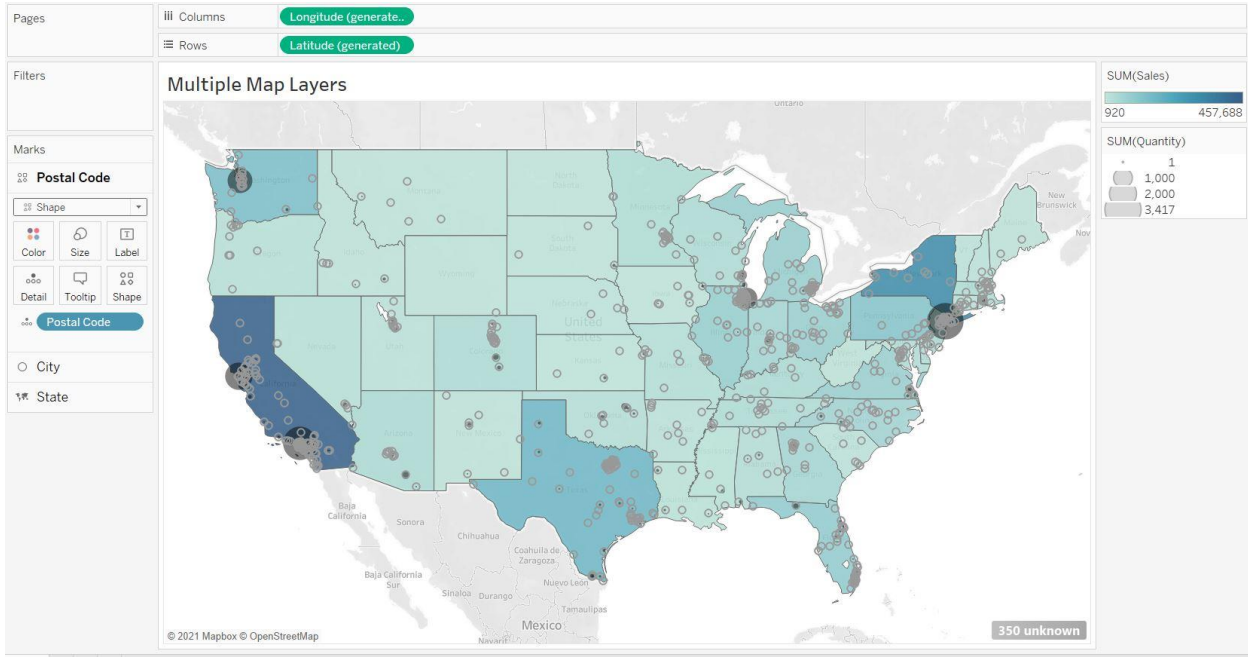
Step 12: A new marks layer is added for **Postal Code** and the layer is displayed in the view



STEPS TO CREATE MAP LAYERS

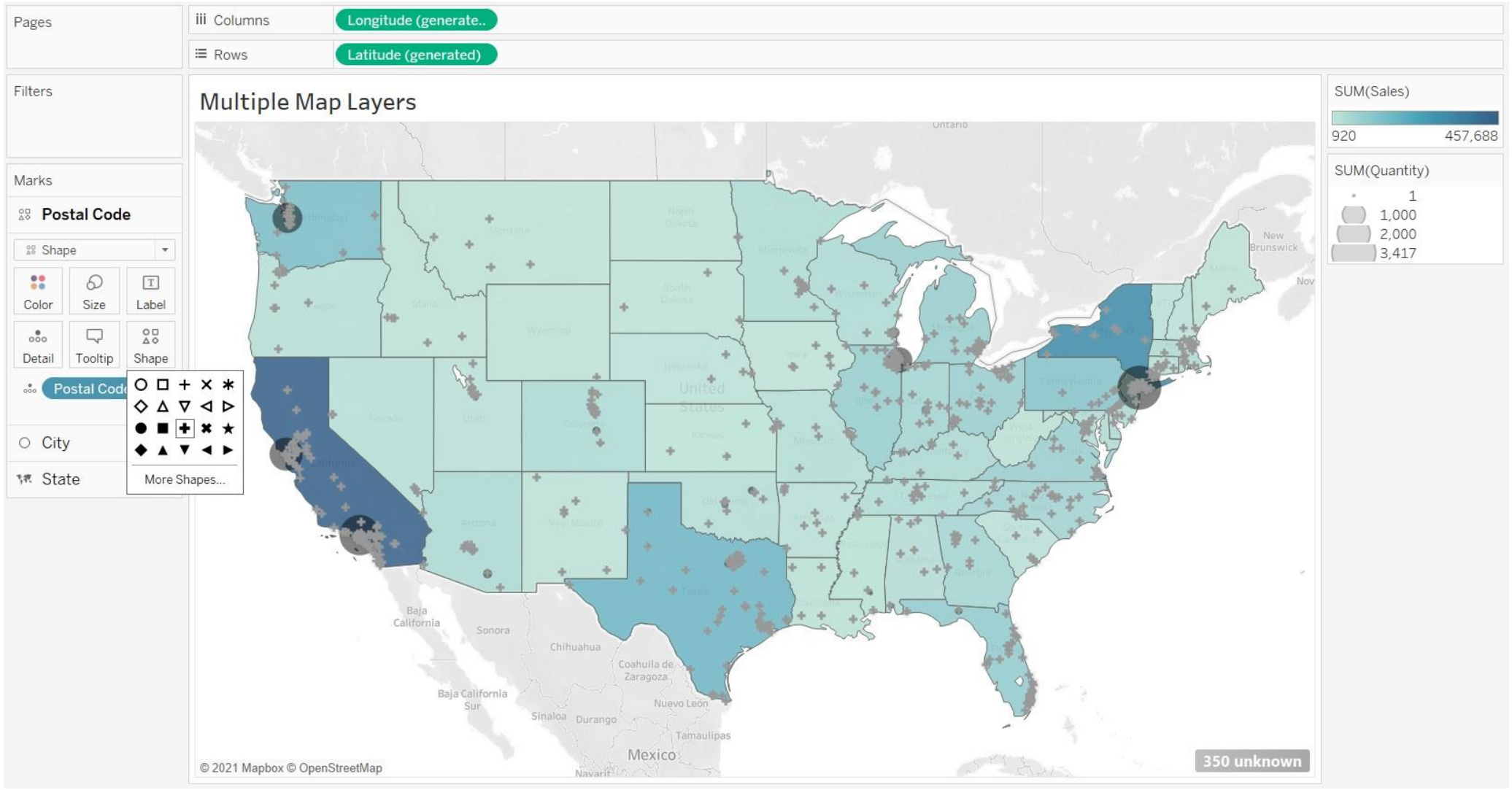
Step 13: Change the **Mark** type to **Shape**





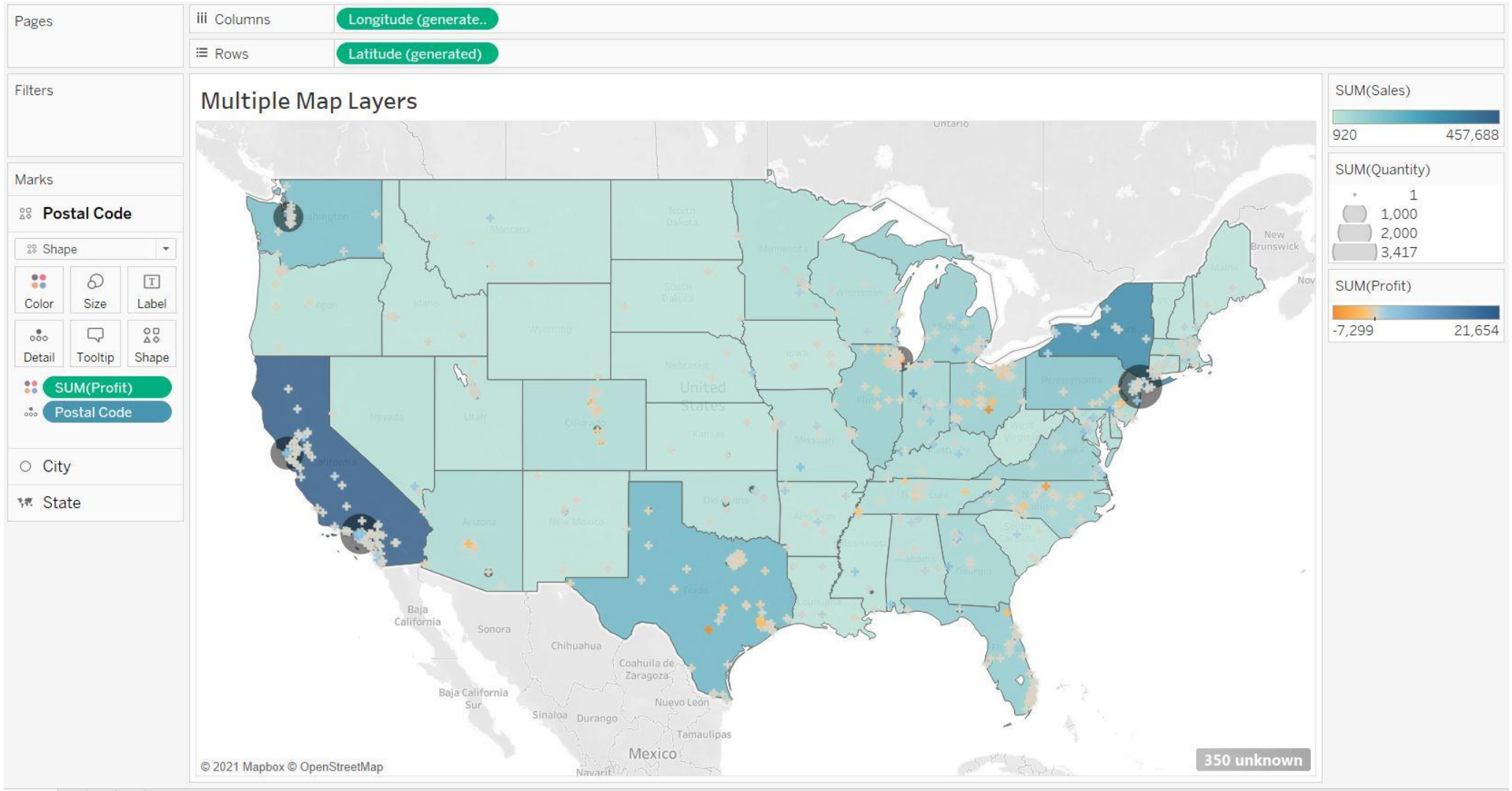
STEPS TO CREATE MAP LAYERS

Step 14: Change the shape type as required



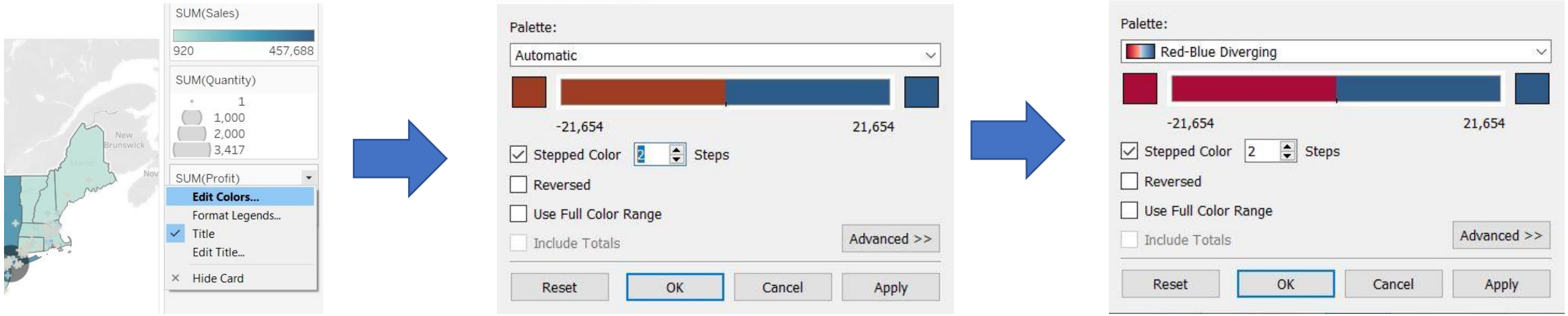
STEPS TO CREATE MAP LAYERS

Step 15: Drag and drop **Profit** measure to **Color** on **Marks** card



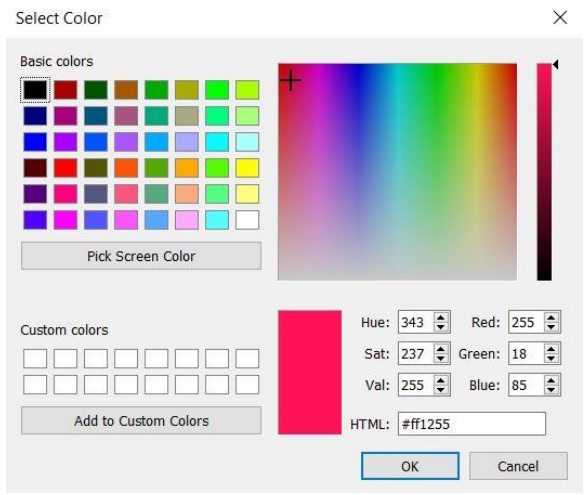
STEPS TO CREATE MAP LAYERS

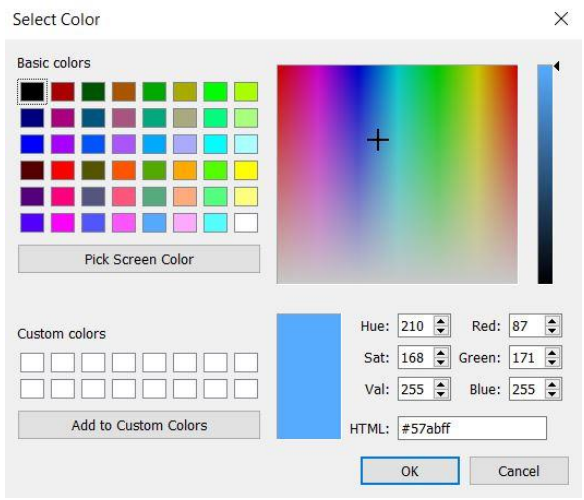
Step 16a: Format with a diverging, stepped color palette with just two colors to highlight whether profits are positive (blue) or negative (red)

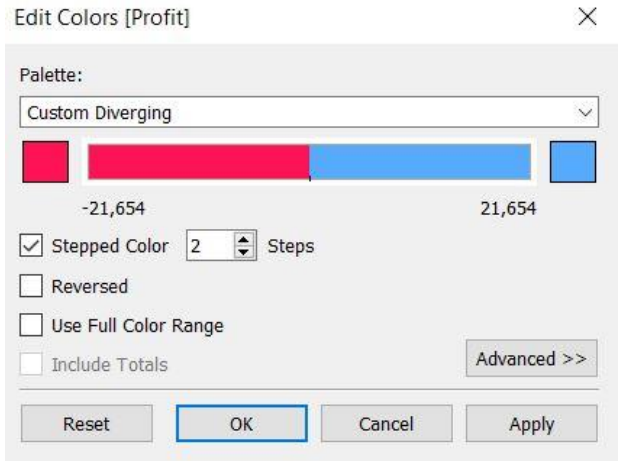


STEPS TO CREATE MAP LAYERS

Step 16b: Format with a diverging, stepped color palette with just two colors to highlight whether profits are positive (blue) or negative (red)







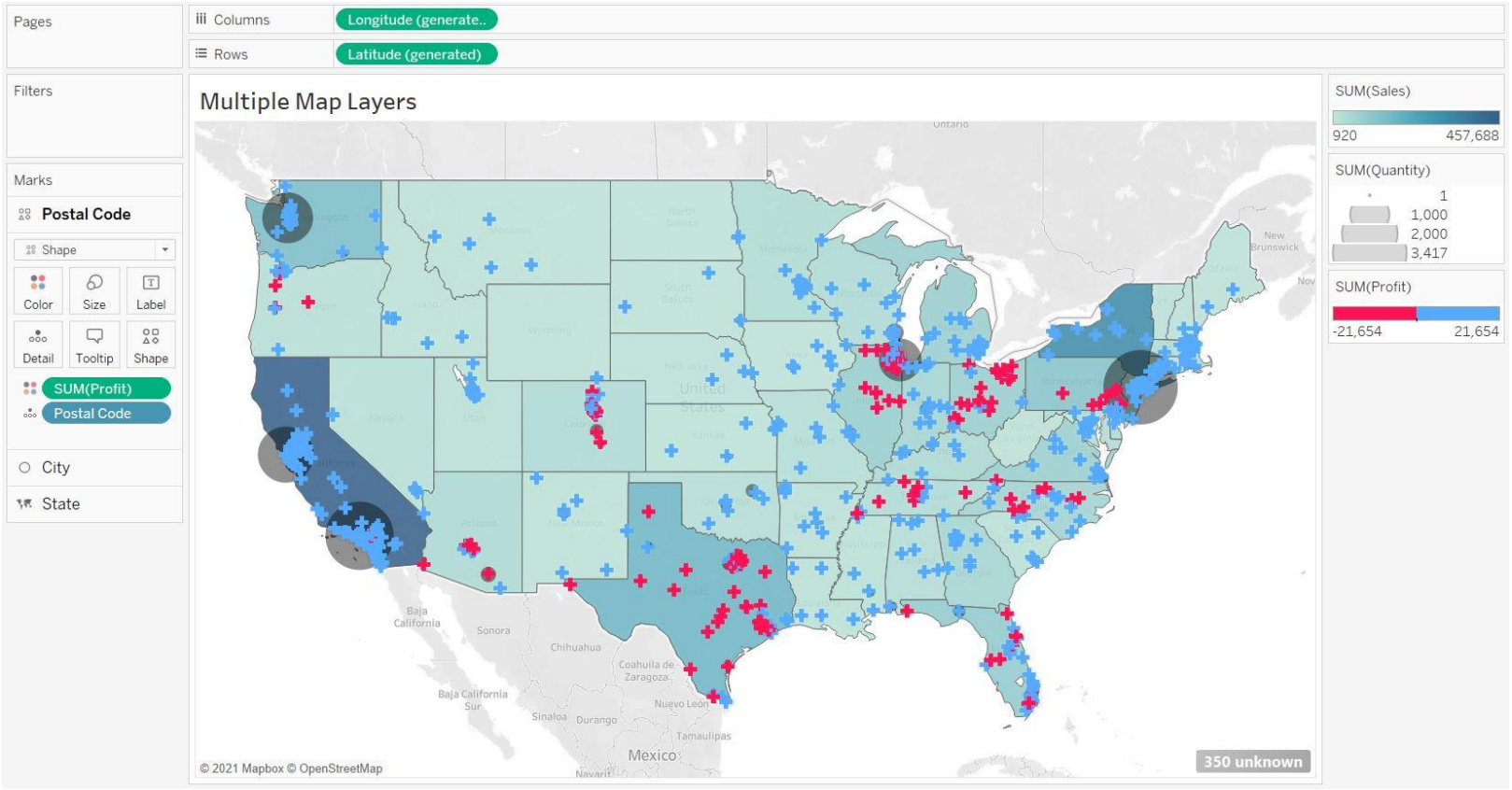
STEPS TO CREATE MAP LAYERS

Step 17: The map now shows three layers, each at a different level of granularity, showing three separate measures using different encodings

State Layer is used to show the details of **Sales** via **Color**

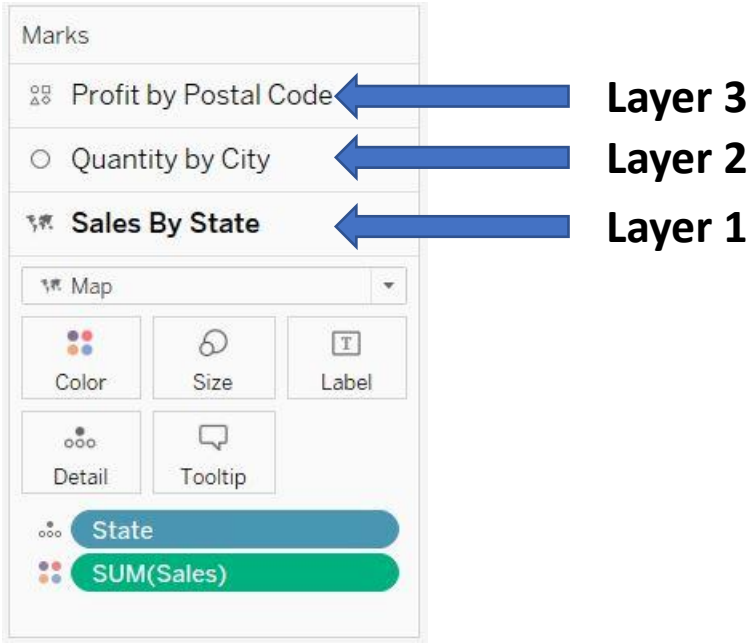
City Layer is used to show the details of **Quantity** via **Size**

Postal Code Layer is used to show the details of **Profit** via **Stepped 2 colors**



MAP LAYERS

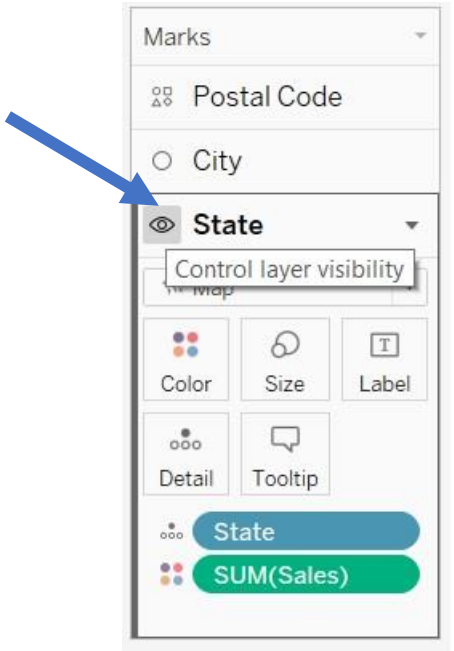
For each layer added to a map a corresponding marks card is created, so the spatial element on each layer can be encoded using a different mark type and formatting if desired

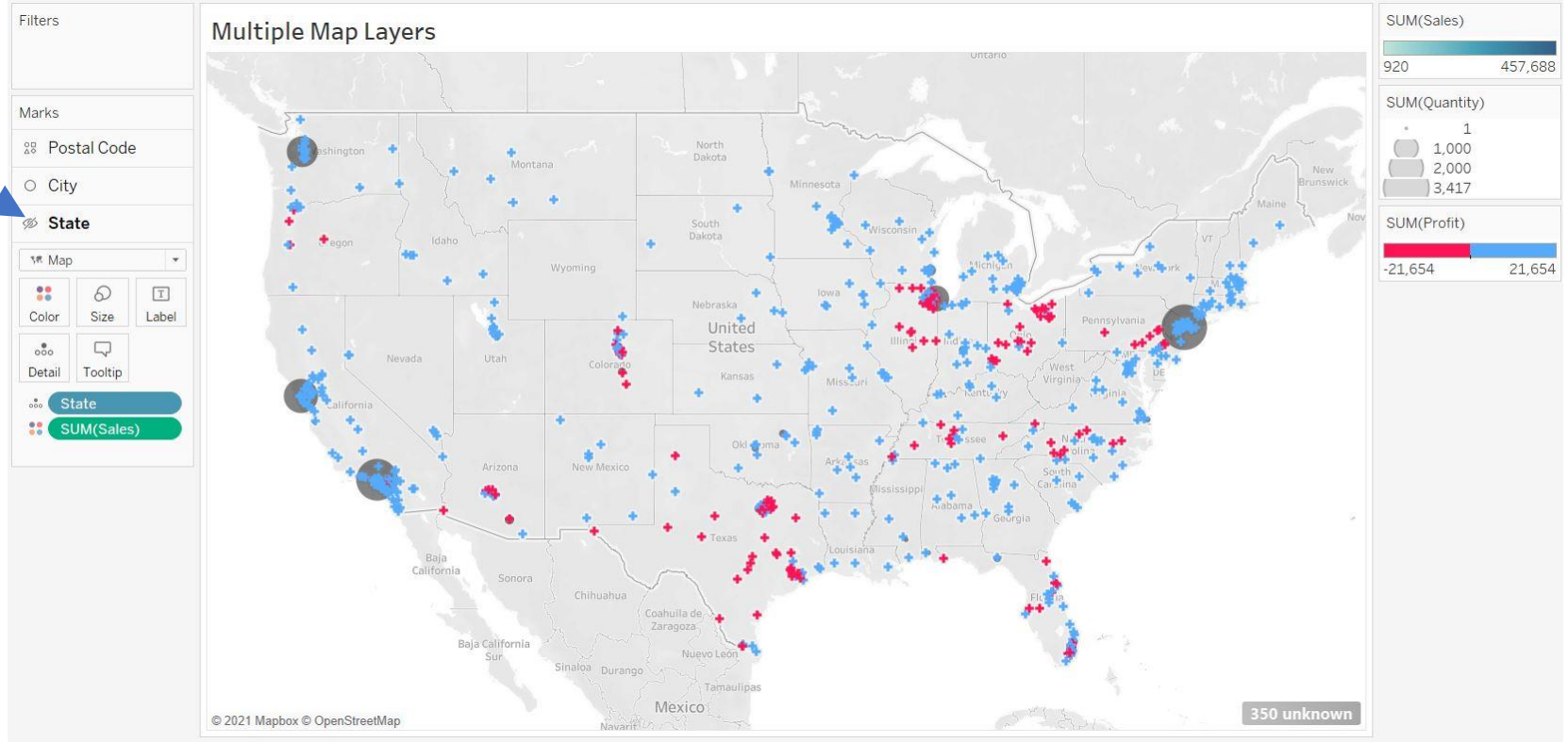


TOGGLE VISIBLITY

We can switch the visibility of any map layer on or off simply by clicking the eye icon to the left of its name

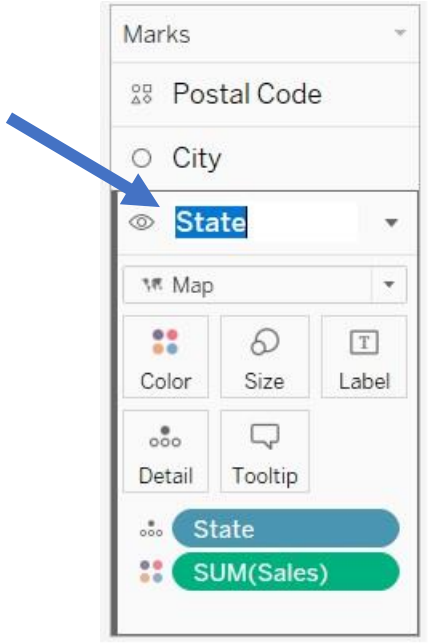
Clicking the eye turns the visibility off and the icon is updated to show a line through it

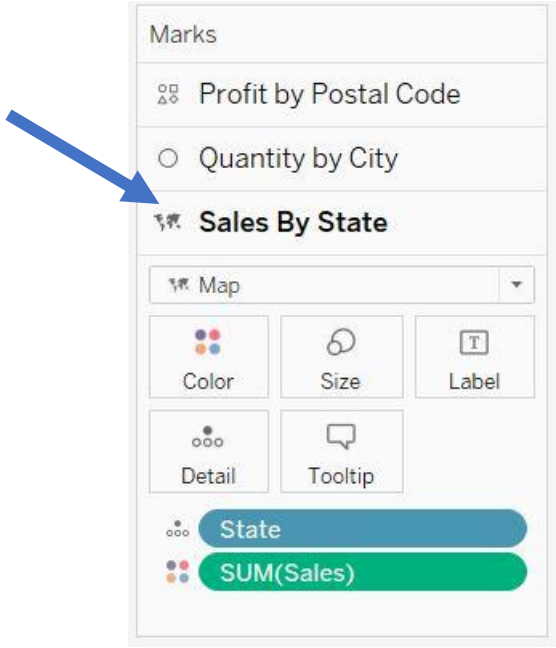




RENAME MAP LAYERS

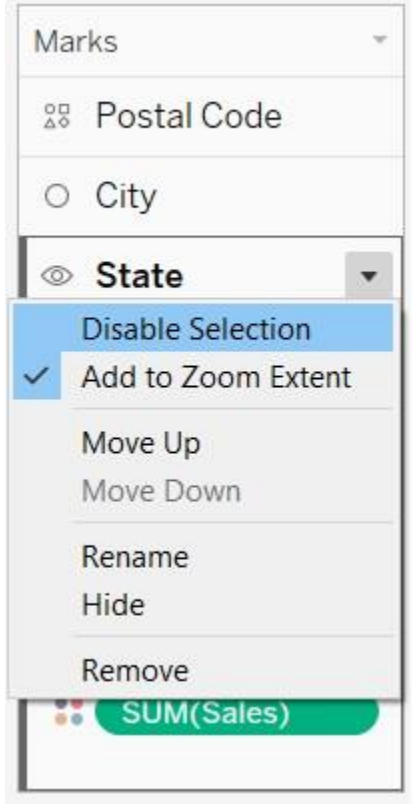
The default Map Layer names can be changed by double clicking the existing layer name and typing a new one





ADDITIONAL MAP LAYER OPTIONS

Each map layer has a menu with the following options:



Option	Description
Disable Selection	Disables marks being selected on this layer, which is useful for customizing the user experience, for example, to allow only cities to be selected and not states.
Add to Zoom Extent	When ticked, ensures the marks on this layer will be visible when the maps zoom level is not pinned
Move Up	Moves this map layer up the stack of layers
Move Down	Moves the layer down
Rename	To rename the layer
Hide	The same as clicking on the eye icon to hide the layer
Remove	Deletes this layer (and associated marks) from the view