User Tasks:

As someone that would like to travel to big cities across the US, I want to view data correlating the 7 cities presented below to understand record precipitation levels to prepare for my trip.

- Charlotte, North Carolina
- Los Angeles, California
- Indianapolis, Indiana
- Jacksonville, Florida
- Chicago, Illinois
- Philadelphia, Pennsylvania
- Pheonix, Arizona

As someone that enjoys traveling to Jacksonville, Florida and Chicago, Illinois, I want to see the precipitation averages, actual precipitation levels, and record precipitation levels in the two cities during the month of August for different years.

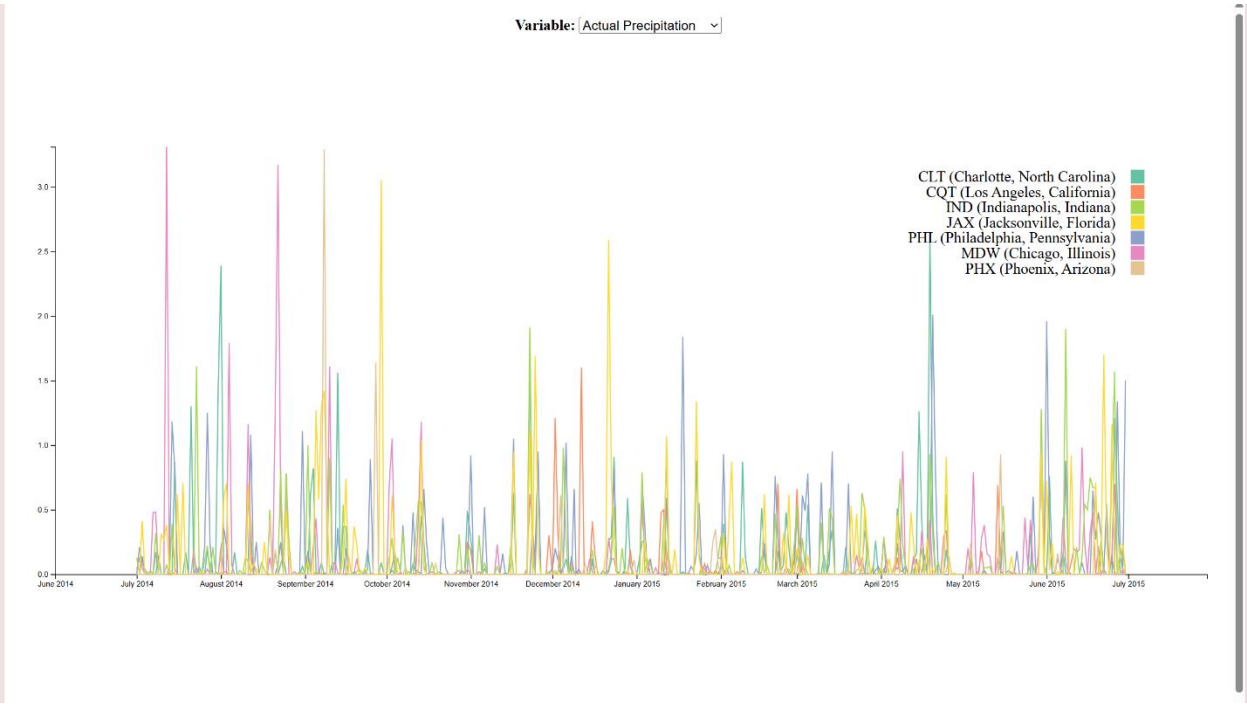
As someone studying weather patterns, I want to zoom in and observe outliers in the 2 given years for high precipitation records.

Design Overview:

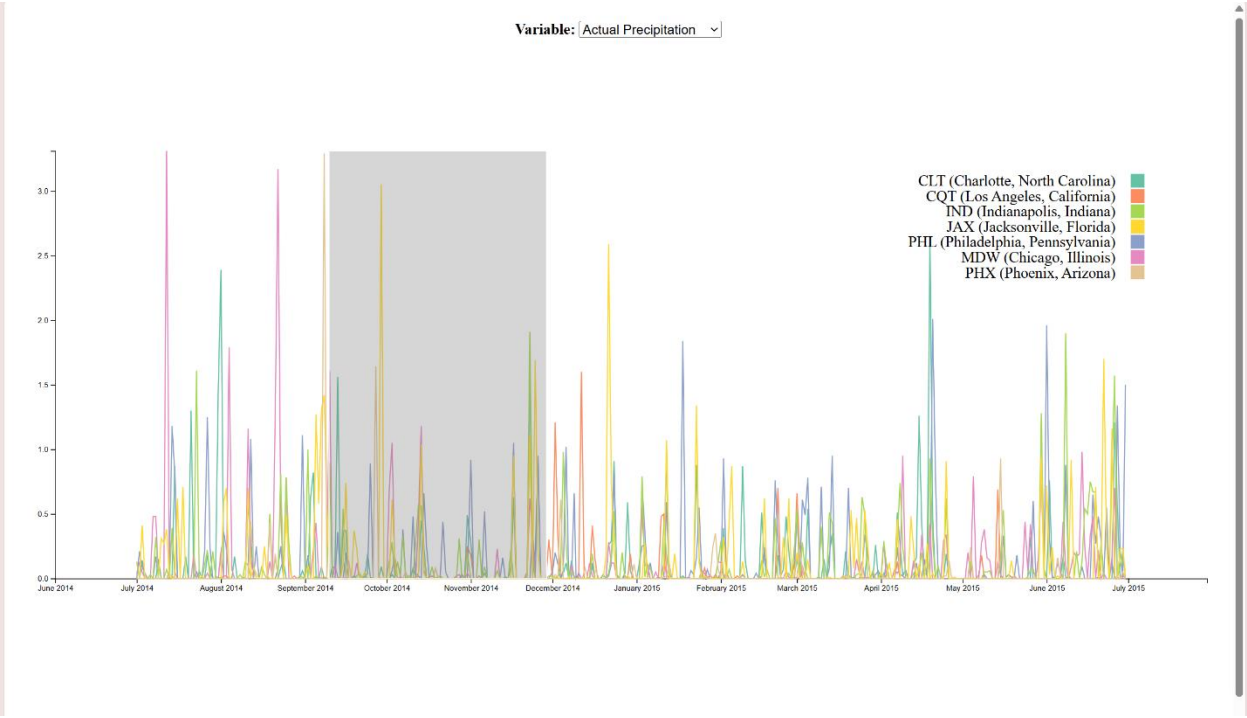
This visualization is a comparative analysis of precipitation data for 7 different cities over 2014-2015. There is a timeline with a line graph representing different data for each city based on the color. The dropdown menu selector allows for selection of different types of precipitation data to observe, which include actual, average, and record precipitation data. The legend on the right side of the graph shows a color coded key for the different colors for each city that has data given.

The interaction includes a zoom feature. When the user selects parts of the data, it will zoom in on the timeline and zoom in on the portion of the data for that timeline. This zoom can be repeated to focus on the data the user wants, and there can be zoom selection after zoom selection. The selector is a drag and select feature, and right clicking on any space on the graph allows the graph to zoom back out to the original state of the full timeline. It isolates frames of the data based on timelines.

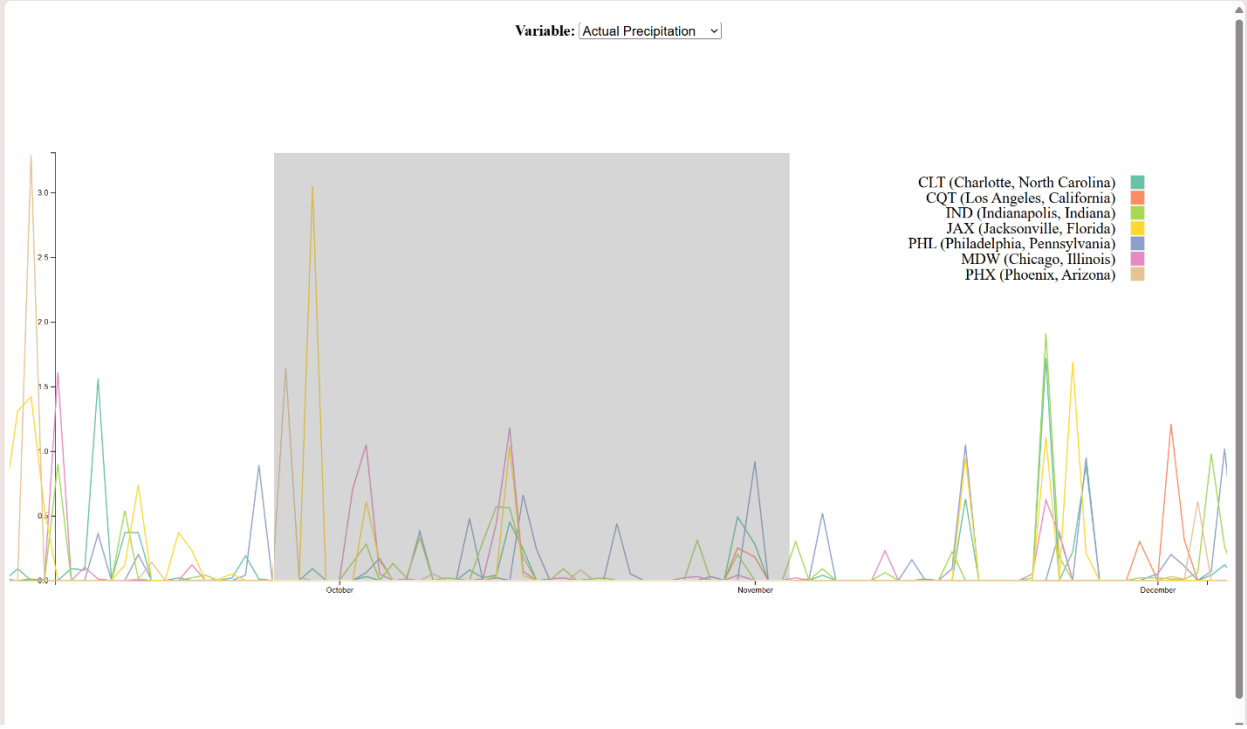
This visualization has analytical objectives of color coded city representation and differentiation with a legend that allows interaction for different precipitation data, allowing interactions with timeframes.



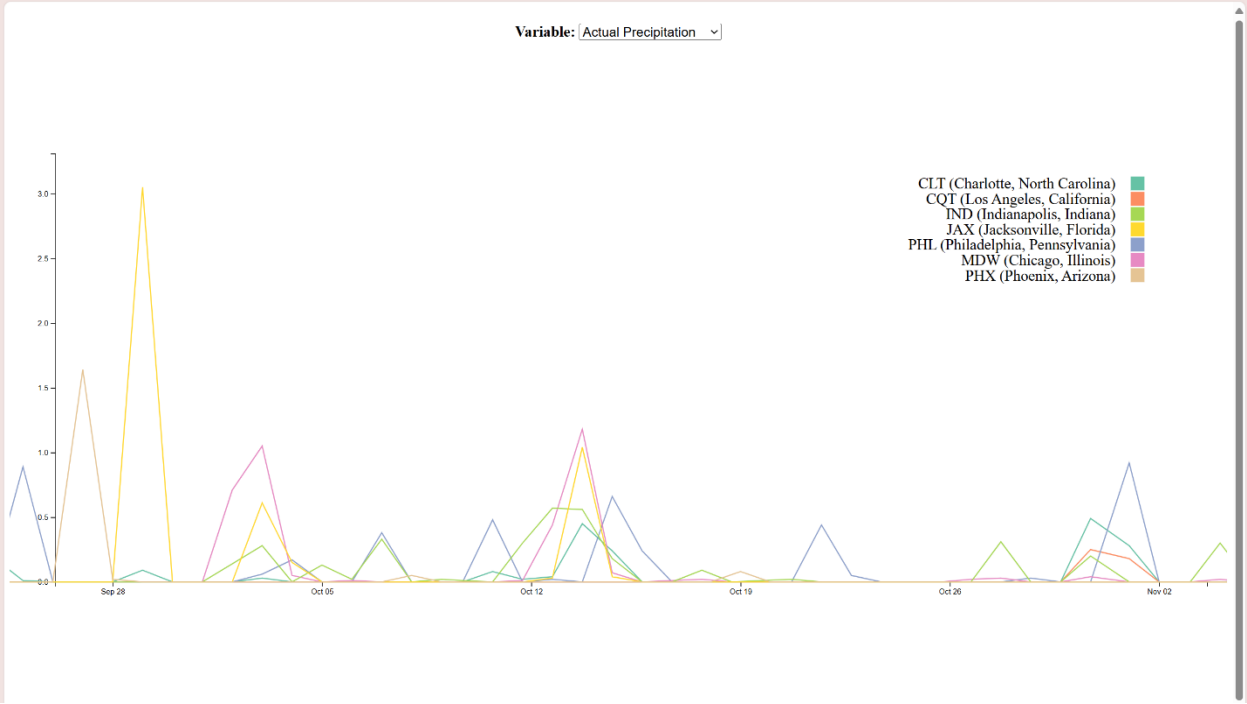
The visualization is the default and primary view of the precipitation data, set to actual precipitation levels by city from 2014-2015.



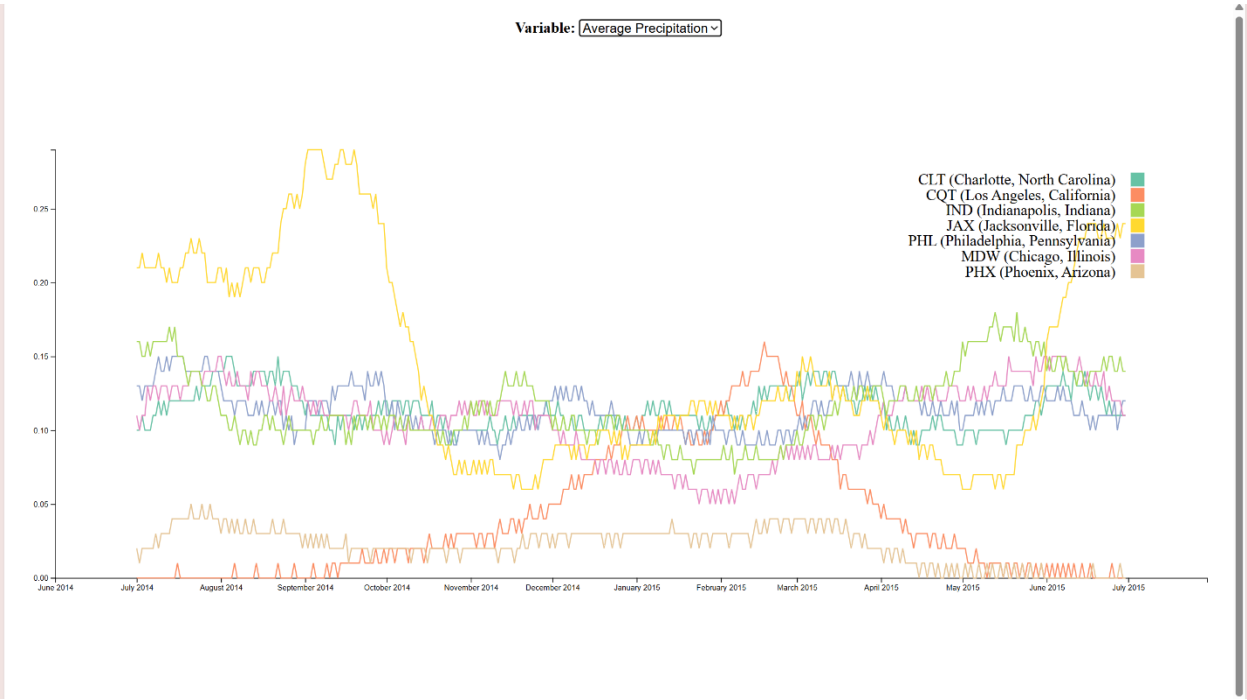
This is the selector of a couple months in 2014 prior to the frane of data updating



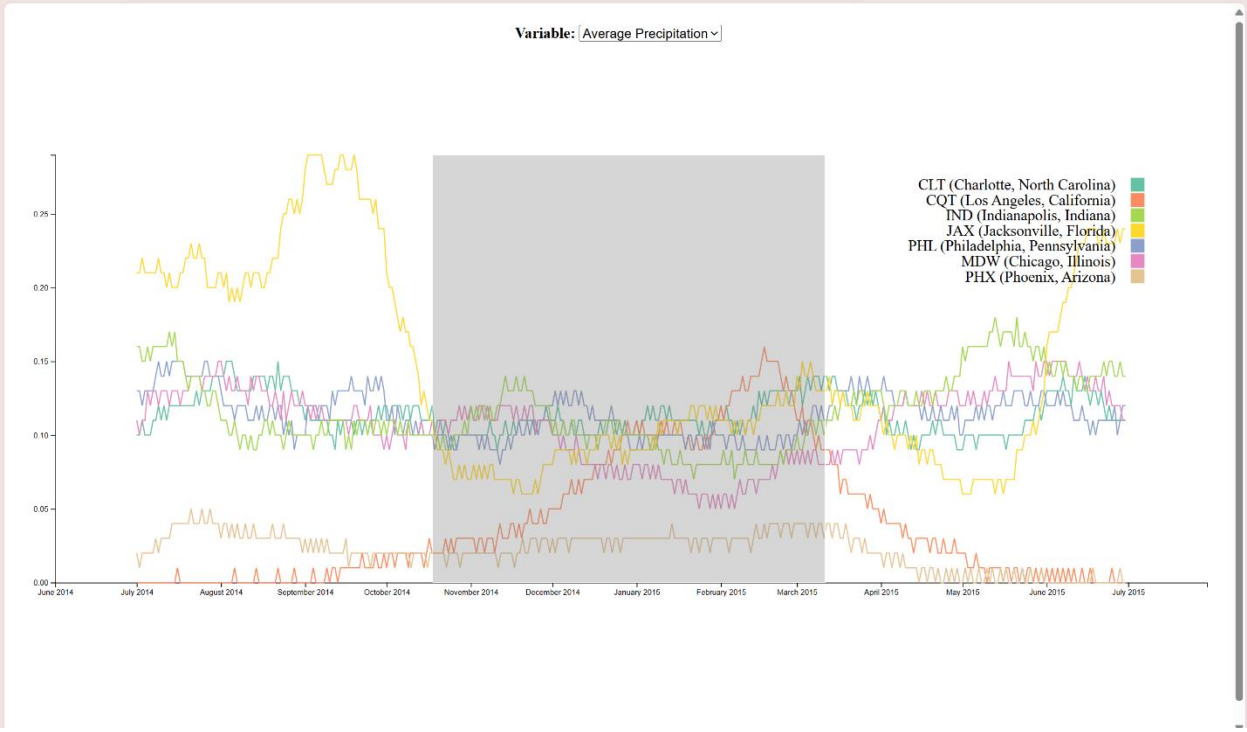
This is the next frame, zoomed in to the next frame with a selector for the next frame selection.



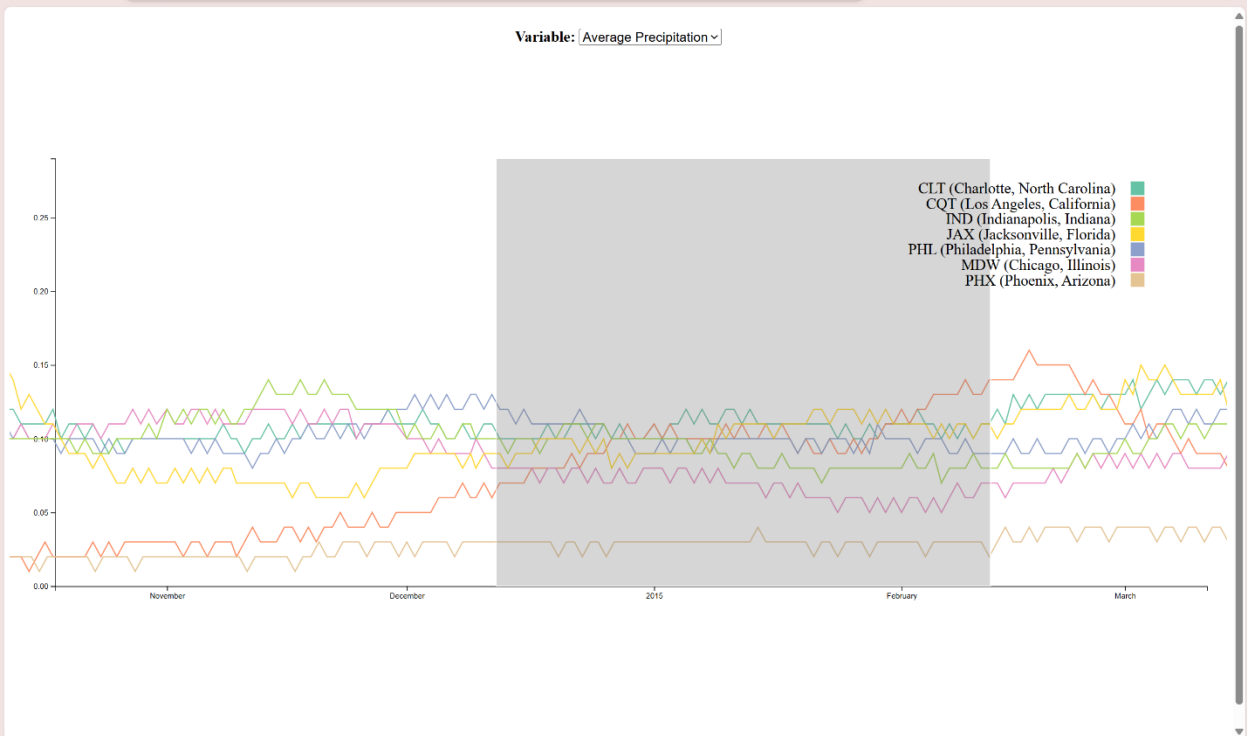
This is the next view zoomed in after the selector from September to November and in more detail.



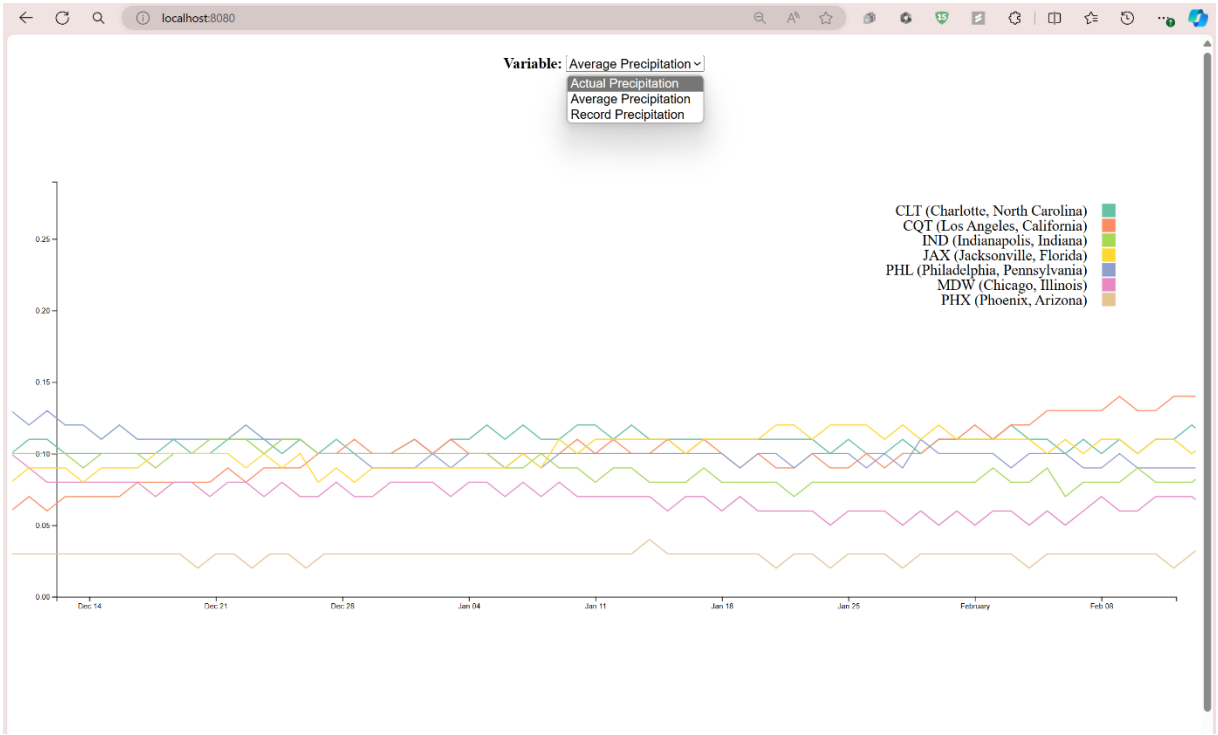
This is the selection from the dropdown menu to average precipitation, where the data has changed and now shows average precipitation instead.



This is a zoom in selection of frannes from specific months in the timeline of the data.



This is the selected view of a frame of timeline in a zoomed in view.



This is the dropdown menu shown that shows the possible variables the user can explore.