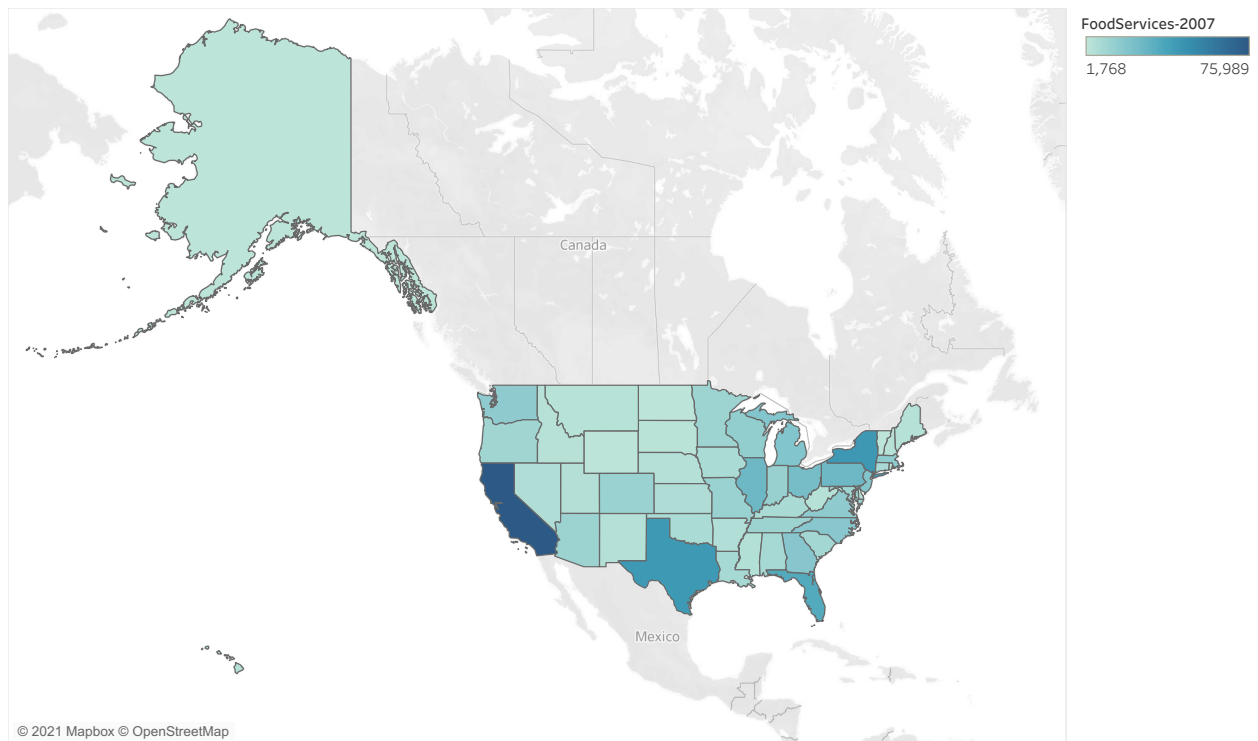


DSC 465  
HW 2  
Daniel O'Brien  
01/31/21

1.

a. Food Service by State

Food Service By State

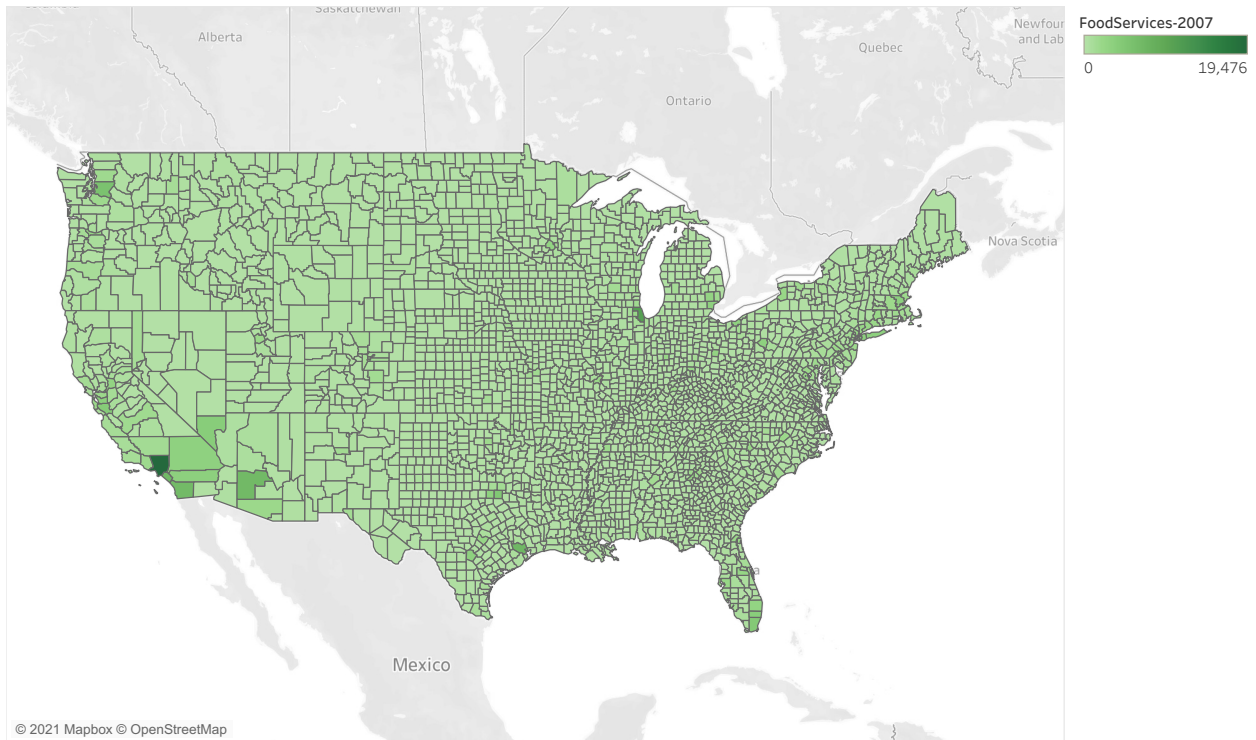


Map based on Longitude (generated) and Latitude (generated). Color shows sum of FoodServices-2007. Details are shown for State. The view is filtered on sum of FoodServices-2007, which ranges from 1,768 to 75,989.

This graph shows us food service by state, with a darker color indicating more food services and a lighter color indicating fewer food services, as explained by the key. We can see that states with larger populations have more food services with California, Texas and New York with the most food services.

b. Food Services by County:

## Food Service By State



Map based on Longitude (generated) and Latitude (generated). Color shows sum of FoodServices-2007. Details are shown for State and County. The view is filtered on sum of FoodServices-2007, which ranges from 0 to 19,476.

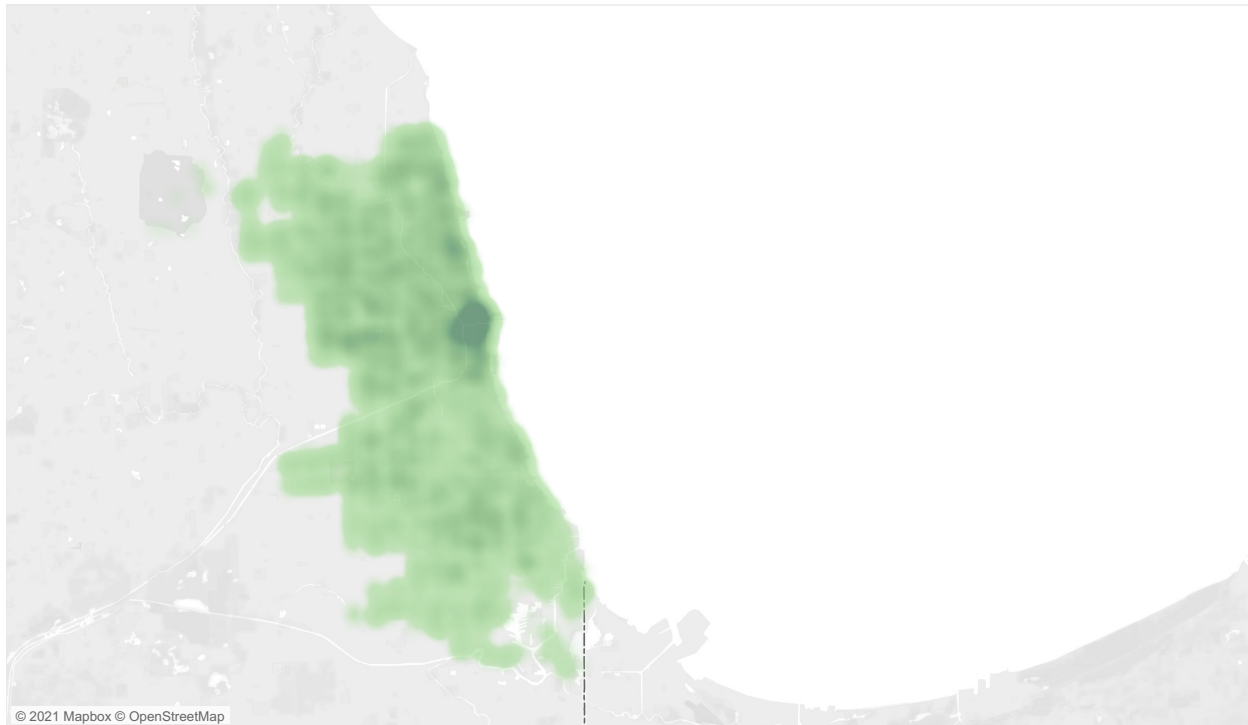
For this problem, I had a hard time coming up with a color scheme that clearly demonstrated the differences in county. Above some of the counties with higher levels of distribution are easy to see, such as Los Angeles, other are a little harder to see, such as the counties in Texas with higher levels of food distribution.

2.

a. Geographic plot showing where accidents occur:

We can see that there is a high concentration of accidents occurring near the middle of the city, most likely in the loop. There are some other pocket of higher rates of accidents in other parts of the city as well.

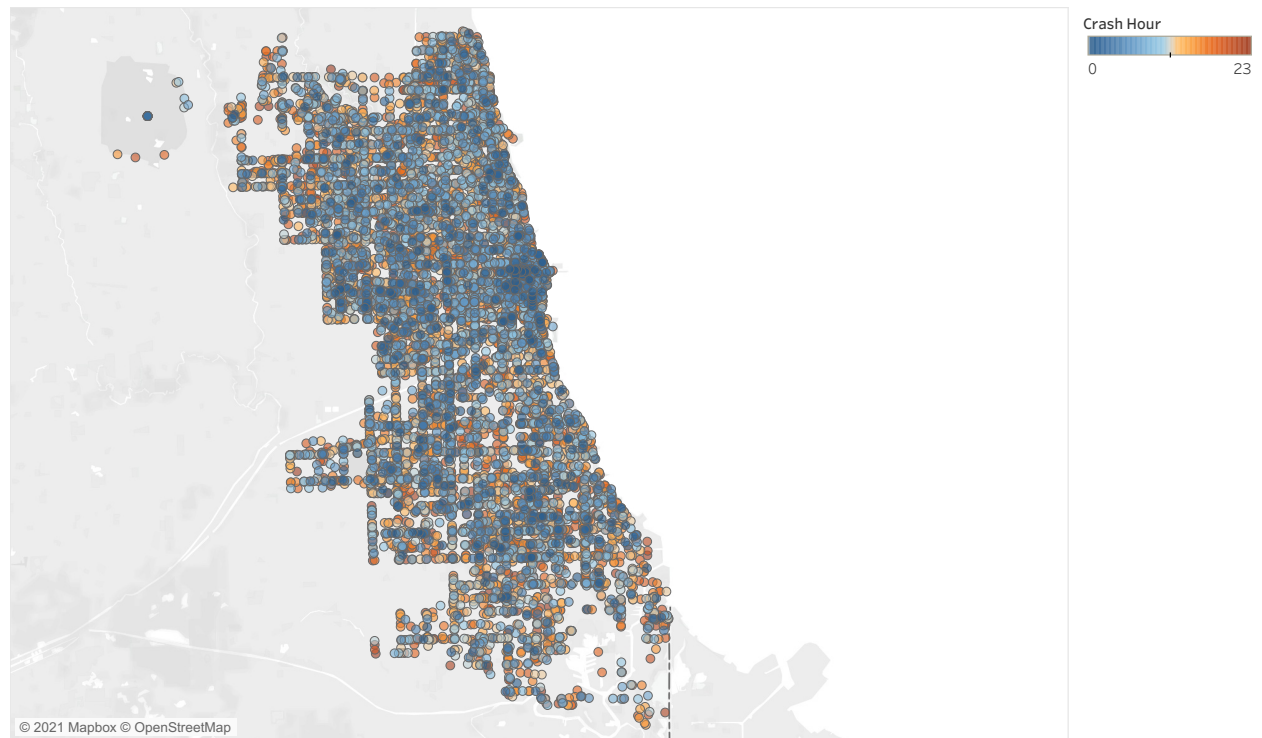
## Chicago Accident Occurrences



Map based on Longitude and Latitude.

b. Traffic accidents by time of day. As can be seen by the legend, the dark blue points represent very early in the morning, and the dark orange points represent very late at night. It would seem that in the loop, the majority of accidents are occurring in the morning, between the hours of midnight and 8 AM. Some of this can be attributed to rush hour, while the really early ones are probable caused by people who are still out from the previous night. I chose this graph because the shape of the city allows us to see roughly where accidents are occurring, although the number of points do make it difficult to see exactly where accidents occur. The color scheme allows us to see the difference between the morning and the afternoon and evening pretty easily, although close before midnight, and close after midnight are shown as very different colors, even though they could be separated by minutes.

### Chicago Accident Occurences By Time

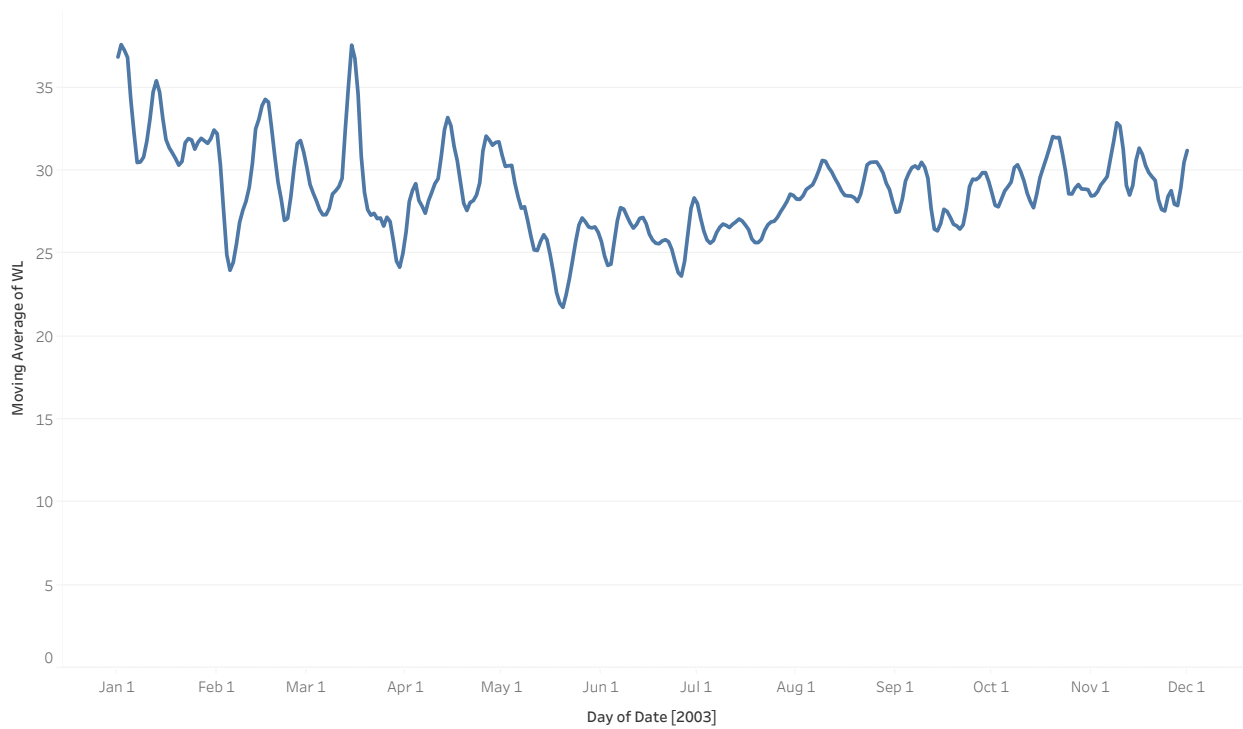


Map based on Longitude and Latitude. Color shows details about Crash Hour.

3.

a.

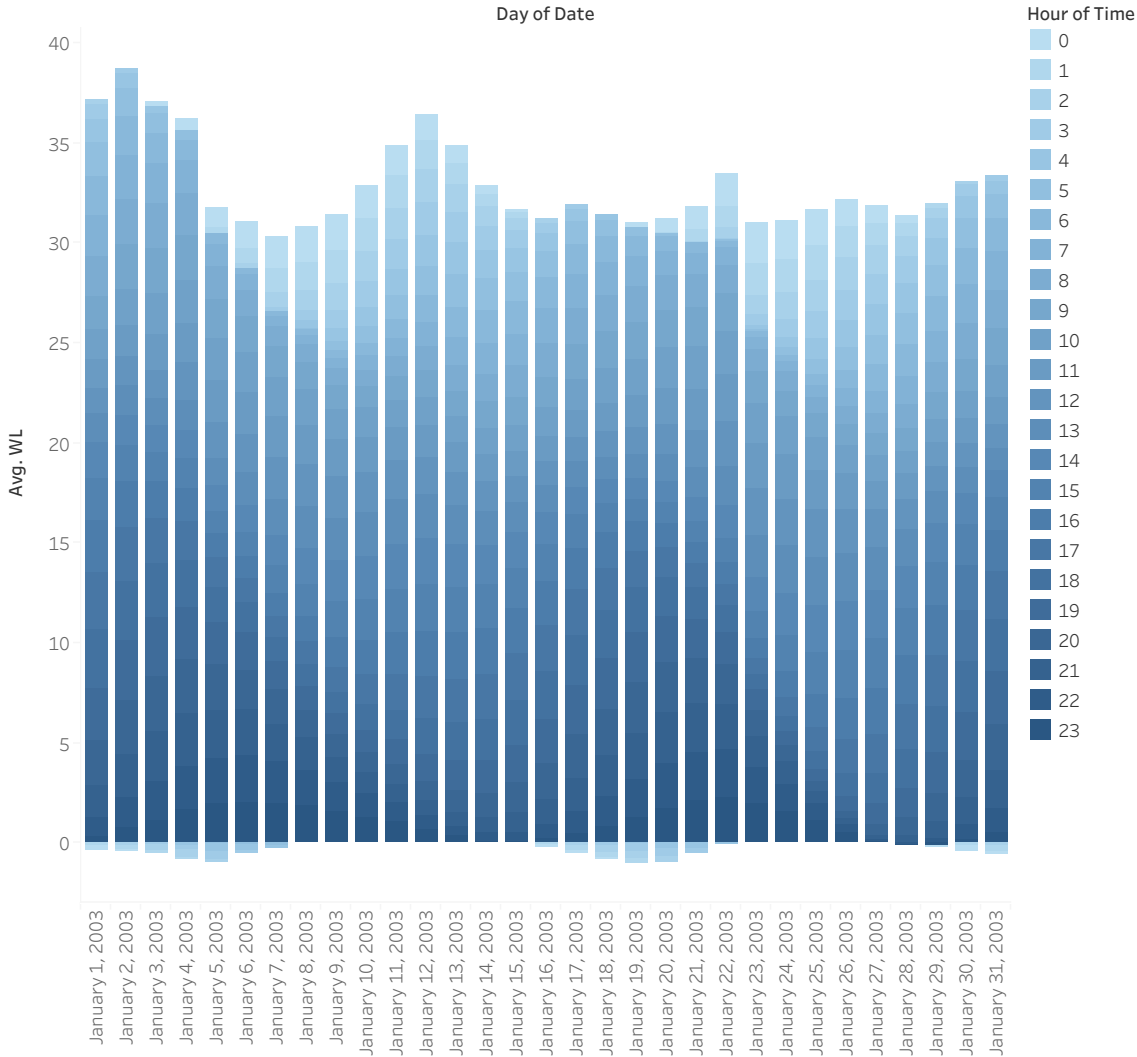
Moving Average Days



The trend of Moving Average of WL for Date Day.

b.

## Water Level over the month of January

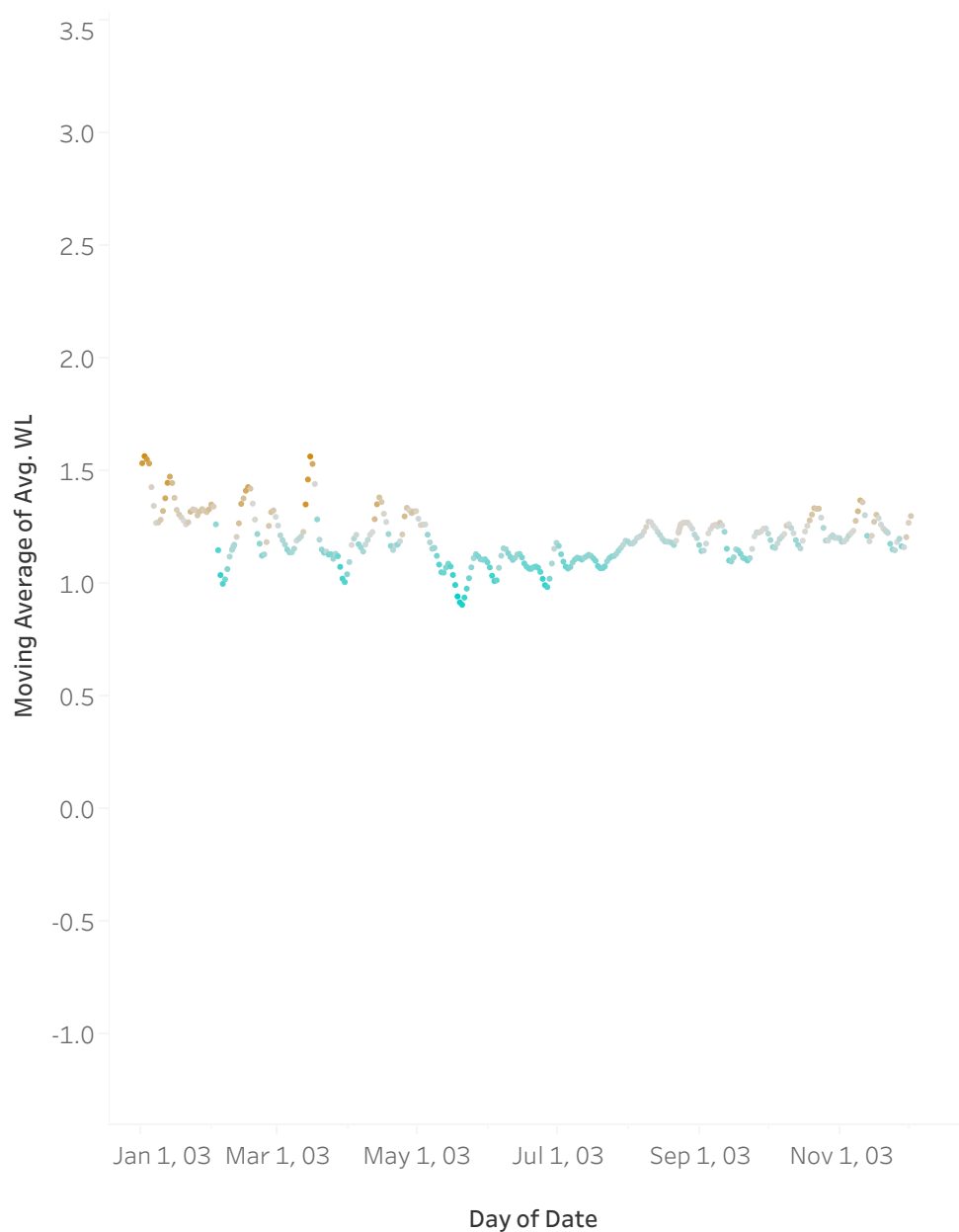


Average of WL for each Date Day. Color shows details about Time Hour. The data is filtered on Date Day and Date Month. The Date Day filter ranges from January 1, 2003 to December 1, 2003. The Date Month filter ranges from January 2003 to February 2003. The view is filtered on Date Day, which keeps 31 of 335 members.

c. The first graph shows us the overall trend of the water level throughout the year of 2003. We do not see the exact values of each day, but rather a smoothed out average. We lose a bit of precision with this type of graph, especially if it is our goal to determine a precise water level reading for a specific day. However, we do gain some insight into larger trends occurring throughout the year. We can see that in mid-March there appears to be a high water level, while there were lows near the end of May. With the second graph, we can see a smaller window of time, but with much more precision. For instance, we can tell that in the mornings of January 8<sup>th</sup> – January 15<sup>th</sup> the average water level was higher than most other parts of those days. We can also tell that the latest hours in the day rarely correlated with a higher average water level than other parts of the day.

4. For custom divergent color scale, I chose a turquoise blue and orange color to demonstrate the contrast between the high water level and low water level. The image did not copy well, so I added a screen shot of the line as well. I chose these colors specifically, because the colors do not overpower each other, which was the case with many other color options.

# Moving Average Water Level with Customized Color



The trend of Moving Average of Avg. WL for Date Day. Color shows average of WL. The view is filtered on Date Day, which includes dates on or after January 1, 2003.

