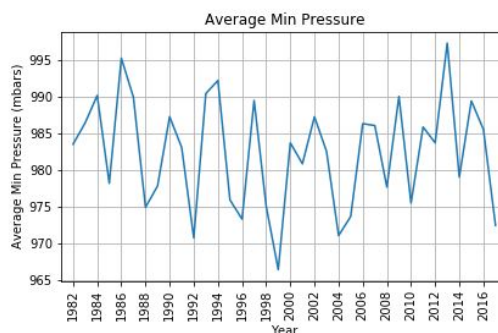
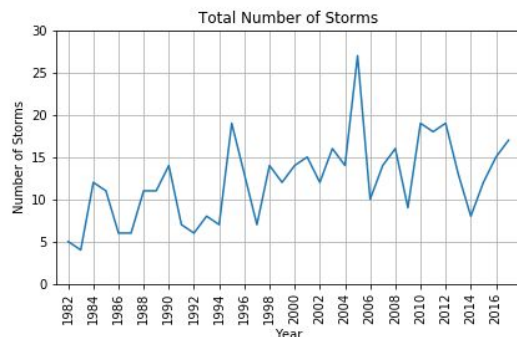
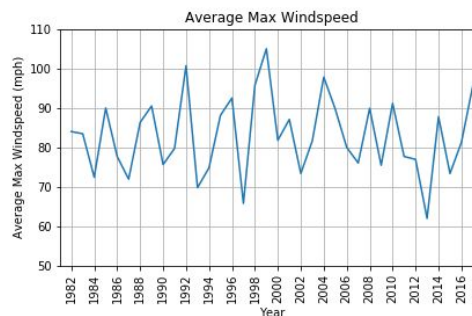
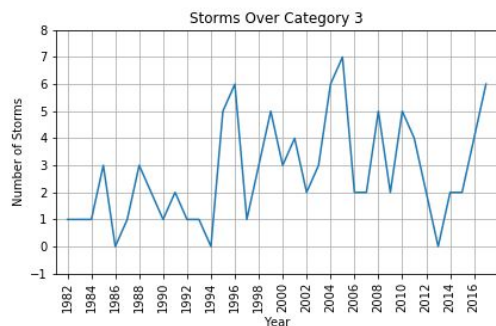
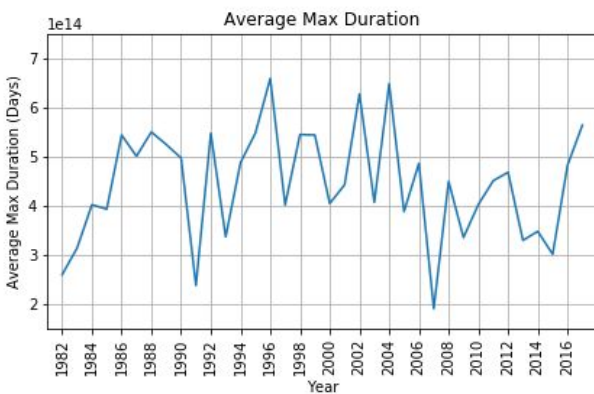


# Final Data Analysis - Historical Storm Data

## Have Hurricanes and Tropical Storms Gotten Stronger in the Last 35 Years? More Numerous?

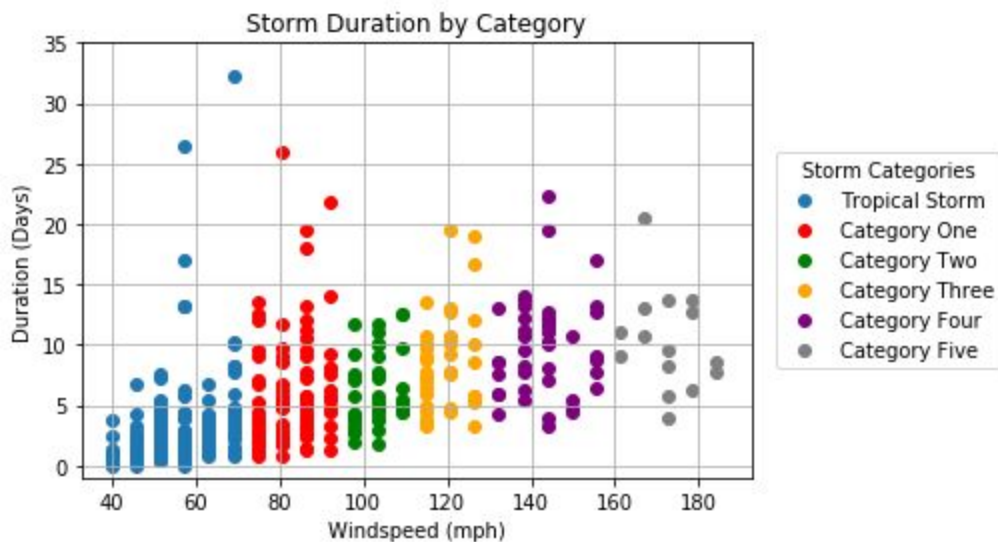
- Total number of storms has periodic peaks that increase and ends on an upward trend, and a similar one can be found in the plot for number of major storms (Category 3 and above).
- The plots for wind speed and barometric pressure are less clear, though both have periodic peaks that are largely increasing in maximum value and both have trends that indicate stronger storms at the end of 2017 (upward trend for wind speed, downward trend for barometric pressure).
- Average duration tells a clearer picture, with increasing periodic peaks and a major upward trend at 2017.
- The plots indicate that storms are getting stronger and more frequent, but not consistently so.





## Do Stronger Storms last Longer?

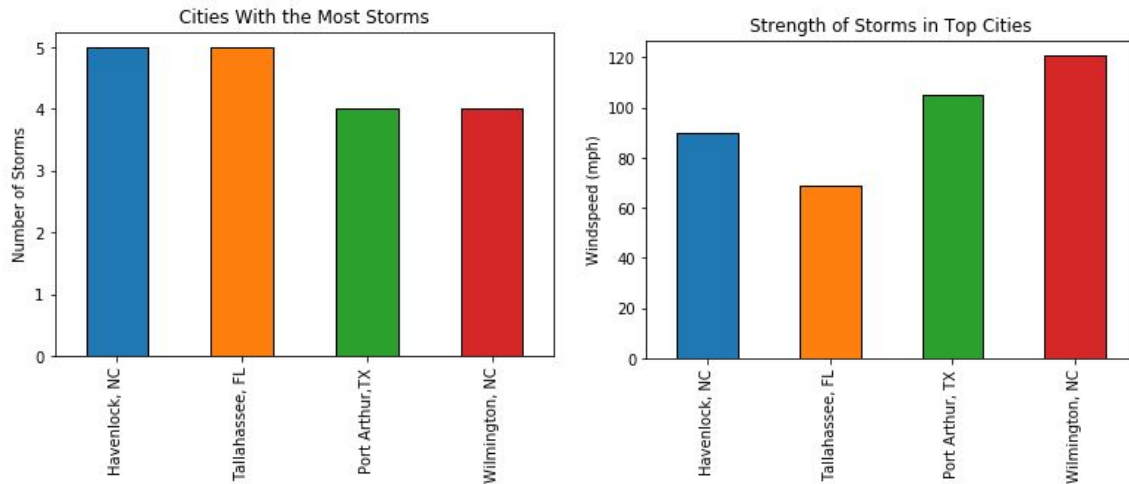
- Our scatter plot of storms by category indicates a consistent upward trend in the minimum duration of storms as category increases.
- The more serious storms are underrepresented, with a larger dataset the trend would likely be even more clear.
- Stronger storms do last longer, but there are some weaker outliers with long durations.



## What Cities are Most Prone to Storms?

- In terms of storm frequency, Havenlock NC and Tallahassee FL are the top cities by 1 with 5 each, but Port Arthur TX and Wilmington NC are close behind.
- In terms of storm strength, Wilmington and Port Arthur are the most dangerous with an average wind speed of 120 and 110 mph respectively.

- North Carolina is clearly more dangerous because it is the only state to have two cities in the top 4. Don't live in coastal NC if you value your home!



## What Part of Hurricane Season has the Most Storms?

- Our plot of number of storms per month shows a clear peak in August (110) and September (140).
- This plot only looks at the months of Hurricane Season (June - November).
- The shape of the peak suggests that the increase in storm number starts in late August, but a plot of storms by day would make that trend clearer.
- Of the total amount of storms during Hurricane Season over 35 years, exactly 33.3% have been in September. August had 26.3%.

