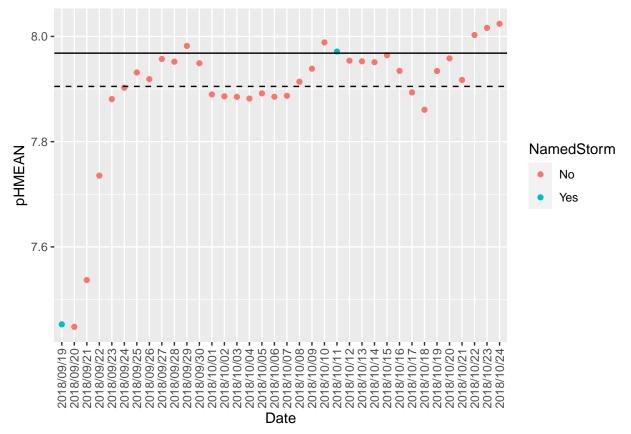# StormExamination

Alexandra Lawrence

Closer Look at Measurements After Storms

```
##          Date    pHMEAN   DICMEAN NamedStorm
## 1  2018/09/19 7.452792   990.200        Yes
## 2  2018/09/20 7.448091  1146.200         No
## 3  2018/09/21 7.537025  1185.733         No
## 4  2018/09/22 7.735478  1397.267         No
## 5  2018/09/23 7.880868  1664.367         No
## 6  2018/09/24 7.902673  1710.800         No
## 7  2018/09/25 7.931440  1762.767         No
## 8  2018/09/26 7.918802  1770.500         No
## 9  2018/09/27 7.957086  1875.200         No
## 10 2018/09/28 7.951953  1893.200         No
## 11 2018/09/29 7.981913  1863.300         No
## 12 2018/09/30 7.949096  1882.833         No
## 13 2018/10/01 7.889746  1729.033         No
## 14 2018/10/02 7.886132  1685.433         No
## 15 2018/10/03 7.885211  1722.367         No
## 16 2018/10/04 7.881885  1621.500         No
## 17 2018/10/05 7.891762  1768.433         No
## 18 2018/10/06 7.885318  1918.767         No
## 19 2018/10/07 7.887184  1933.300         No
## 20 2018/10/08 7.913996  1949.333         No
## 21 2018/10/09 7.938640  1960.933         No
## 22 2018/10/10 7.988581  1990.900         No
## 23 2018/10/11 7.971212  1983.867        Yes
## 24 2018/10/12 7.953958  1973.800         No
## 25 2018/10/13 7.952763  1992.767         No
## 26 2018/10/14 7.950947  1999.800         No
## 27 2018/10/15 7.964377  1966.700         No
## 28 2018/10/16 7.934542  1929.467         No
## 29 2018/10/17 7.893711  1792.833         No
## 30 2018/10/18 7.860551  1587.033         No
## 31 2018/10/19 7.934240  1715.733         No
## 32 2018/10/20 7.958306  1837.667         No
## 33 2018/10/21 7.917230  1763.633         No
## 34 2018/10/22 8.002723  1962.533         No
## 35 2018/10/23 8.016341  1987.333         No
## 36 2018/10/24 8.024008  1989.550         No

## [1] 7.904958

## [1] 7.968201
```
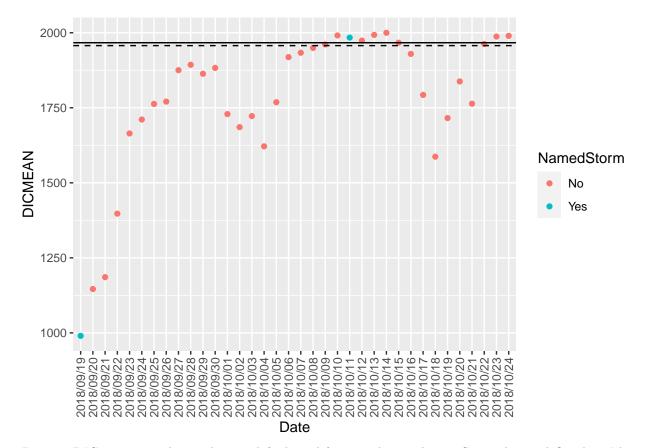
The mean pH value for September is around 7.905, and the mean pH value for October is around 7.97. I have added a dashed line representing September's average and a solid line representing October's average on the plot of the daily recorded pH values for the 36 days recorded after Hurricane Florence. According to this plot, it takes about five days for the pH to rise back to approximately the average level. On October 11th, Hurricane Michael hit the Carolinas as a tropical storm. However, the pH appears to remain steady for four days before dipping slightly for four days and rebounding to the October's average.

```
## [1] 1957.096
```

```
## [1] 1966.7
```

Because DIC appears to be much more left skewed for recordings taken in September and October, I have used the median value to best approximate the average. The dashed line represents the September's median of about 1957.1 and the solid line represents October's median, around 1966.7. After Hurricane Florence hits, it takes seventeen days to return to the median value for September. After Hurricane Michael hits the Carolinas as a tropical storm, the DIC levels remain constant for around five daysm dip below the median for five days, and return to the line.