

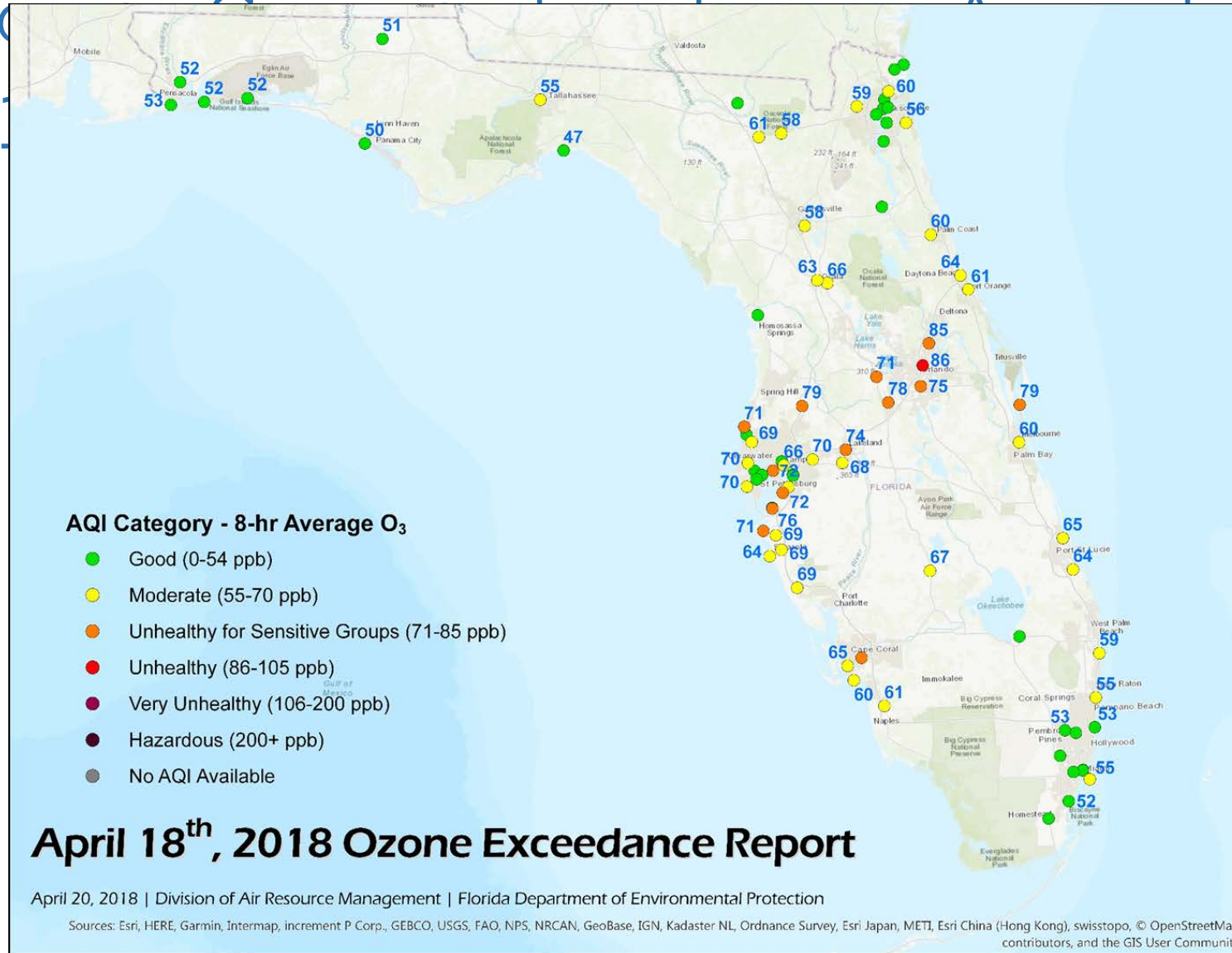


# Florida Ozone Forecasting



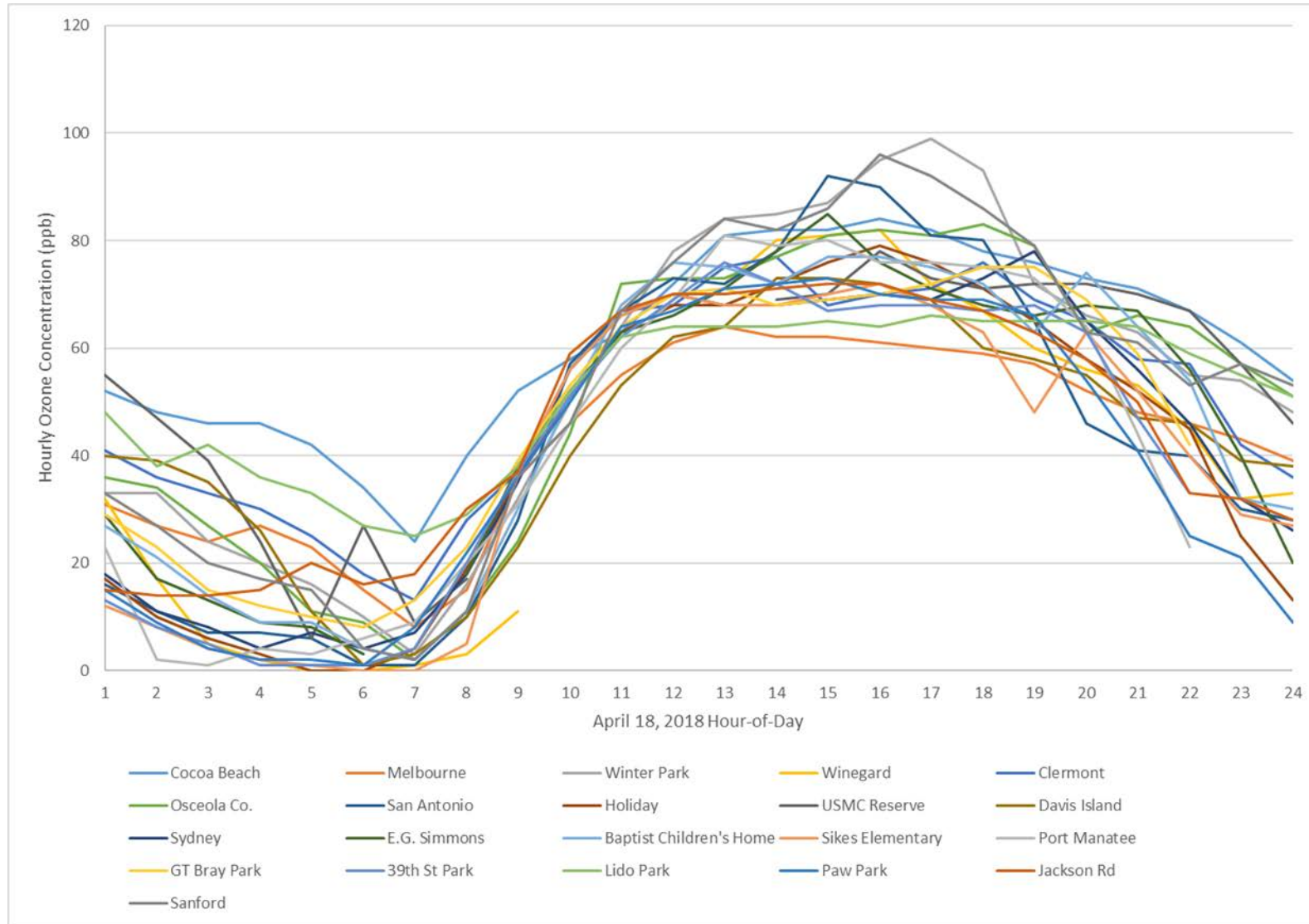
# Daily Maximum 8-hour Average

# Ozone



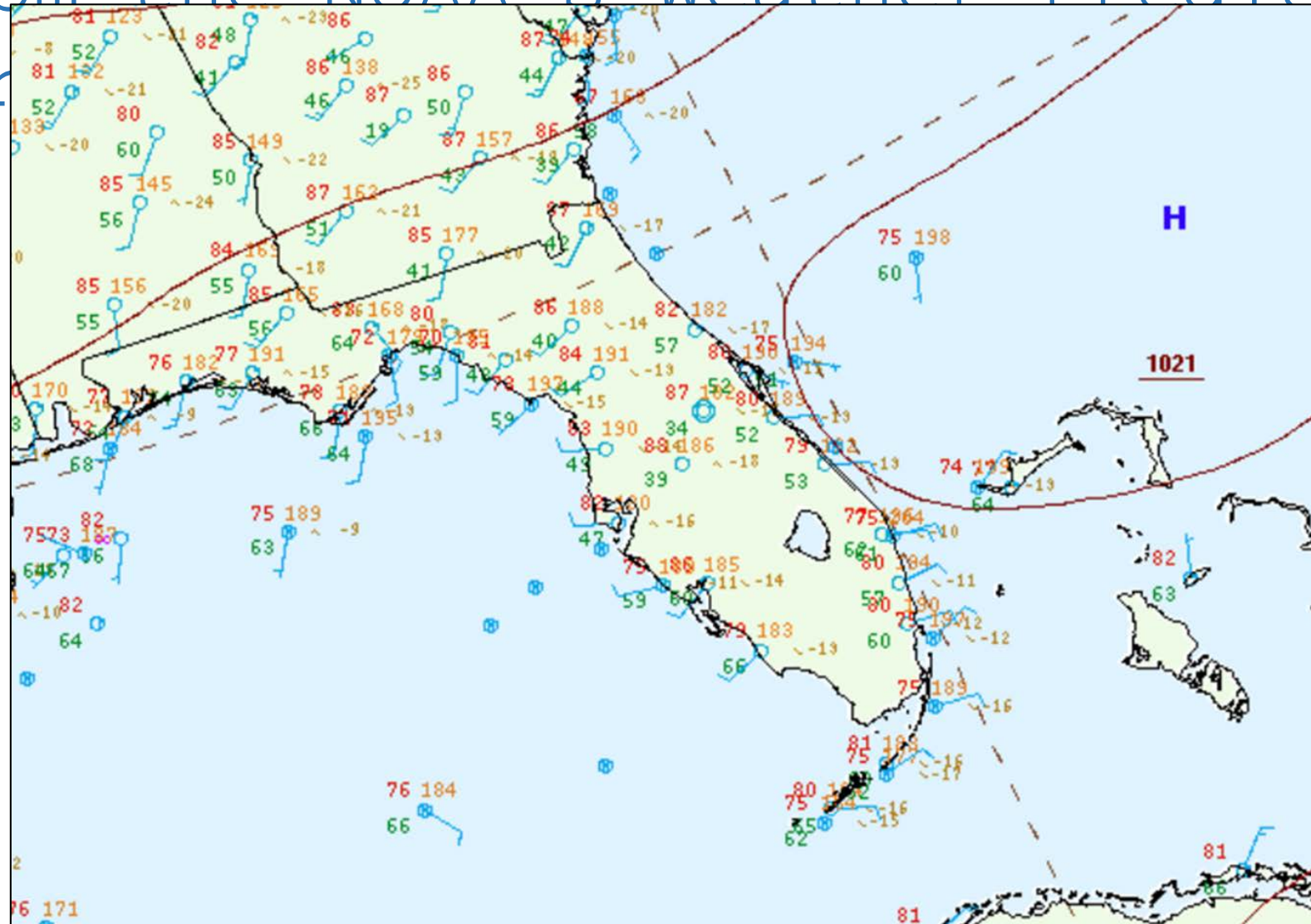


# Hourly Ozone Concentrations



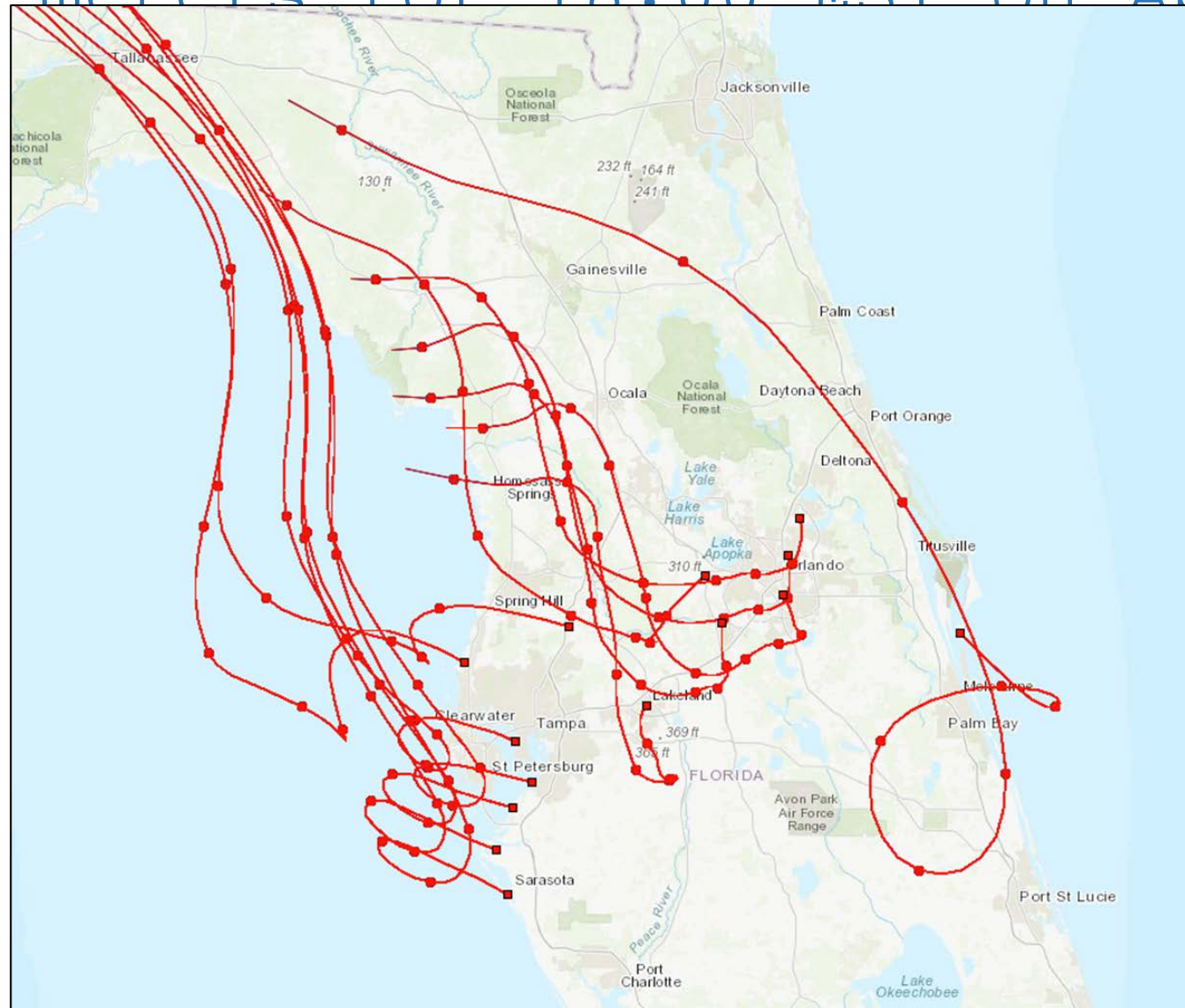


# April 18, 2018 21Z Surface Analysis from the NOAA's Weather Prediction Center





# HYSPLIT Model 48-hour Back-Trajectories at 10 meters for 18:00 EST on April 18, 2018

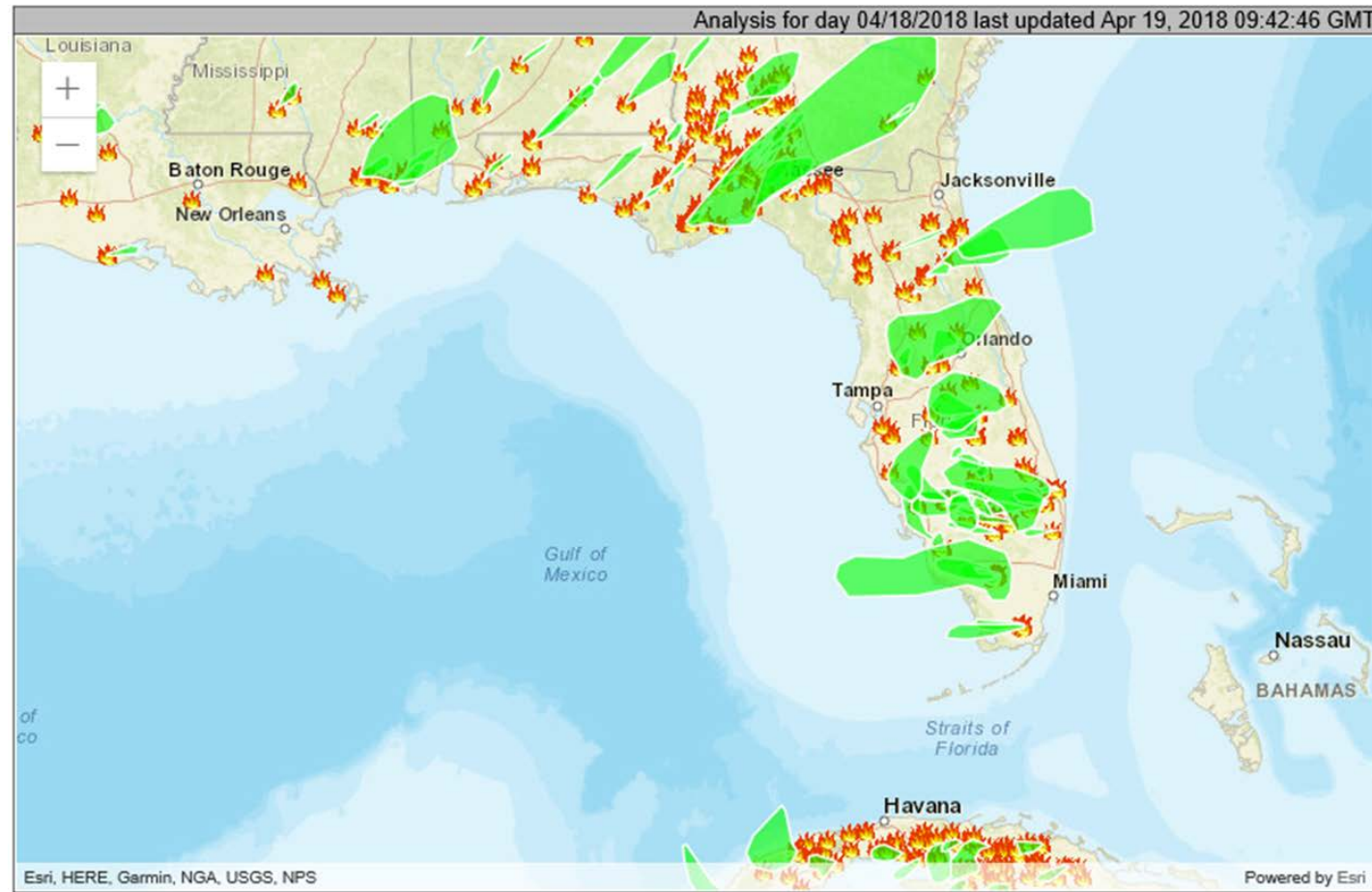




# April 18, 2018 Fires and Plumes Analyzed in Hazard Mapping System Maxim

## Hazard Mapping System Fire and Smoke Product

### Current HMS Analysis





# Forecast Accuracy and Monitor Status

| Monitor     | Air Quality Index Category |                  |                         | 2015-2017 Design Value (ppb) | Projected 2016-2018 Design Value (ppb) | 2018 Ranked 8-hr Averages (Date) |                      |                      |                      | Year-to-Date Exceedances |
|-------------|----------------------------|------------------|-------------------------|------------------------------|--|----------------------------------|----------------------|----------------------|----------------------|--------------------------|
|             | Actual                     | Forecast (Model) | Forecast Responsibility |                              |  | 1 <sup>st</sup> High             | 2 <sup>nd</sup> High | 3 <sup>rd</sup> High | 4 <sup>th</sup> High |                          |
| 12-009-4001 | USG                        | Mod (59)         | FDEP                    | 60                           | 61                                     | 79 (4/18)                        | 67 (3/16)            | 61 (3/15)            | 61 (3/17)            | 1                        |
| 12-057-0081 | USG                        | Mod              | Hillsborough Co.        | 67                           | 66                                     | 72(4/18)                         | 70(4/5)              | 67(3/24)             | 65(3/16)             | 1                        |
| 12-057-1065 | USG                        | Mod              | Hillsborough Co.        | 66                           | 64                                     | 72(4/18)                         | 68(4/5)              | 66(3/24)             | 65(3/16)             | 1                        |
| 12-069-0002 | USG                        | NA               | NA                      | 63                           | 64                                     | 71 (4/18)                        | 65 (3/24)            | 65 (4/17)            | 62 (4/12)            | 1                        |
| 12-081-3002 | USG                        | Mod (63)         | FDEP                    | 61                           | 61                                     | 76 (4/18)                        | 63 (4/5)             | 60 (3/15)            | 60 (4/17)            | 1                        |
| 12-081-4012 | USG                        | Mod (63)         | FDEP                    | 63                           | 62                                     | 71 (4/18)                        | 66 (3/24)            | 62 (4/5)             | 61 (4/12)            | 1                        |
| 12-095-0008 | USG                        | Good             | Orange Co.              | 64                           | 62                                     | 75 (4/18)                        | 62 (3/24)            | 62 (4/17)            | 57 (3/17)            | 1                        |
| 12-095-2002 | Unhealthy                  | Good             | Orange Co.              | 63                           | 64                                     | 86 (4/18)                        | 71 (3/24)            | 64 (3/16)            | 63 (3/17)            | 2                        |
| 12-097-2002 | USG                        | NA               | NA                      | 64                           | 65                                     | 78 (4/18)                        | 66 (3/24)            | 64 (4/5)             | 64 (4/17)            | 1                        |
| 12-101-2001 | USG                        | USG (68)         | FDEP                    | 61                           | 61                                     | 71 (4/18)                        | 70 (3/24)            | 66 (4/6)             | 61 (4/12)            | 1                        |
| 12-101-0005 | USG                        | USG (68)         | FDEP                    | 61                           | 62                                     | 79 (4/18)                        | 71 (3/24)            | 66 (4/6)             | 62 (4/12)            | 2                        |
| 12-105-6006 | USG                        | USG (56)         | FDEP                    | 65                           | 62                                     | 74 (4/18)                        | 66 (4/5)             | 65 (3/24)            | 63 (3/16)            | 1                        |
| 12-117-1002 | USG                        | NA               | NA                      | 63                           | 64                                     | 85 (4/18)                        | 76 (3/24)            | 64 (3/6)             | 64 (3/16)            | 2                        |
| 12-009-0007 | Mod                        | Unhealthy (86)   | FDEP                    | 59                           | 58                                     | 60 (4/18)                        | 57 (4/17)            | 55 (4/19)            | 55 (4/25)            | 0                        |



# Ozone Exceedance Summary

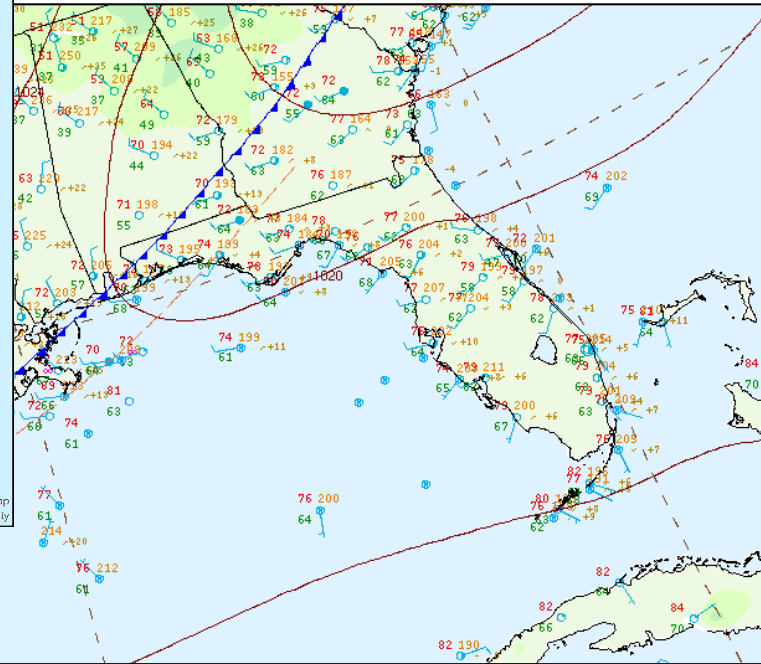
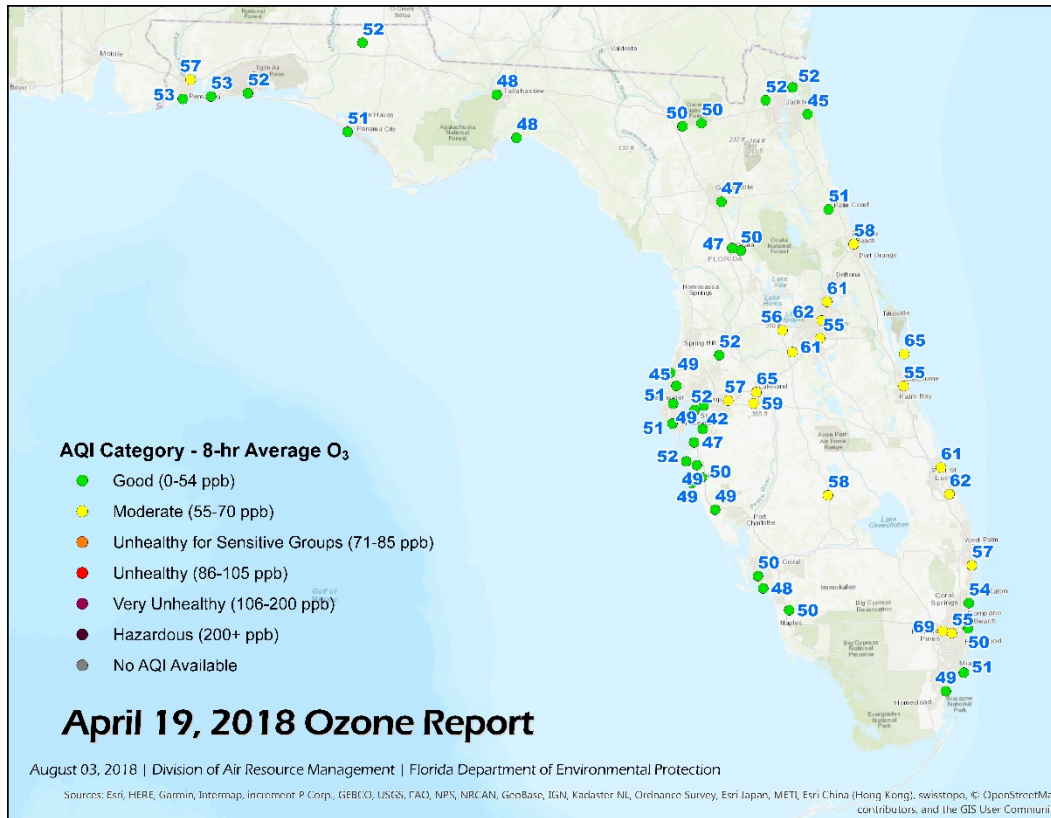
| County       | Monitor Name             | AQS Site ID | Maximum Air Quality Index | Maximum 8-hour Average Concentration (ppb) | Maximum Temperature (°F) | Minimum Relative Humidity (%) |
|--------------|--------------------------|-------------|---------------------------|--|--------------------------|-------------------------------|
| Brevard      | Cocoa Beach              | 12-009-4001 | 129                       | 79   | 79                       | 36                            |
| Hillsborough | Simmons Park             | 12-057-0081 | 105                       | 72   | 84                       | 21                            |
| Hillsborough | Gandy                    | 12-057-1065 | 105                       | 72   | 84                       | 21                            |
| Lake         | Clermont                 | 12-069-0002 | 101                       | 71   | 85                       | 27                            |
| Manatee      | Port Manatee             | 12-081-3002 | 119                       | 76   | 80                       | 39                            |
| Manatee      | GT Bray Park             | 12-081-4012 | 101                       | 71   | 80                       | 39                            |
| Orange       | Winegard                 | 12-095-0008 | 115                       | 75   | 87                       | 15                            |
| Orange       | Winter Park              | 12-095-2002 | 151                       | 86   | 87                       | 15                            |
| Osceola      | Osceola Co. Fire Station | 12-097-2002 | 126                       | 78   | 87                       | 18                            |
| Pasco        | Holiday                  | 12-101-2001 | 101                       | 71   | 84                       | 21                            |
| Pasco        | San Antonio              | 12-101-0005 | 129                       | 79   | 84                       | 21                            |
| Polk         | Baptist Children's Home  | 12-105-6006 | 112                       | 74   | 86                       | 33                            |
| Seminole     | Sanford                  | 12-117-1002 | 150                       | 85   | 80                       | 39                            |





# Melbourne April 19, 2018

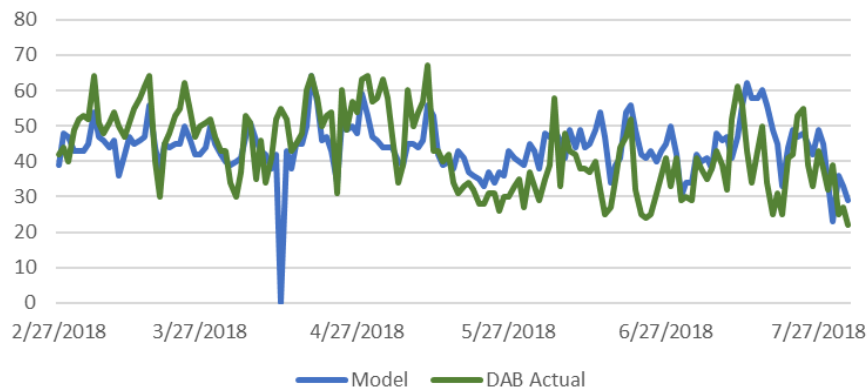
| Model Forecast | Actual 8-hour Maximum |
|----------------|-----------------------|
| 86             | 65                    |



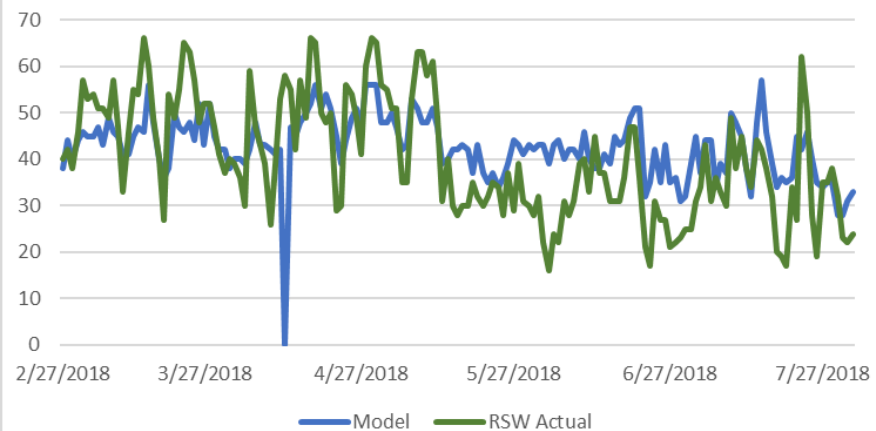


# Forecast Bias

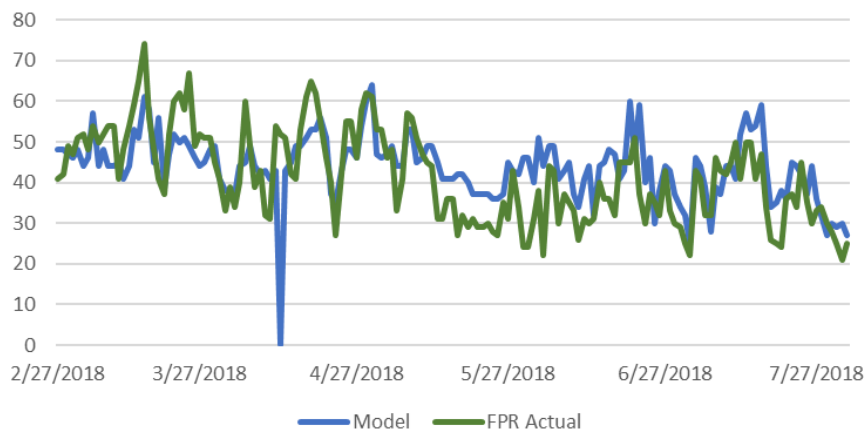
Daytona Beach 2018 CMAQ Model Versus Actual



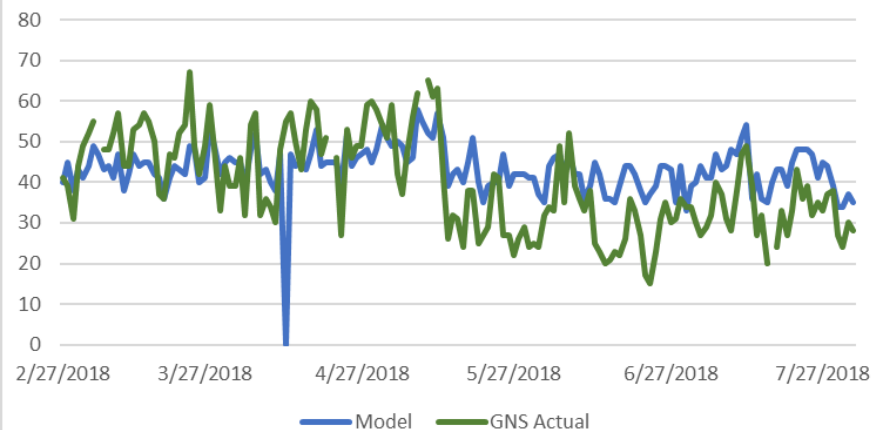
Fort Myers 2018 CMAQ Model Versus Actual



Fort Pierce 2018 CMAQ Model Versus Actual

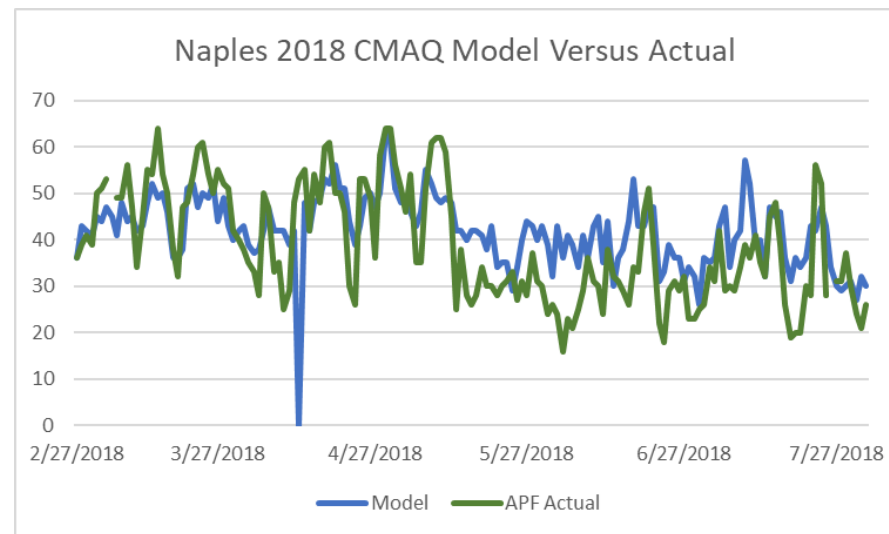
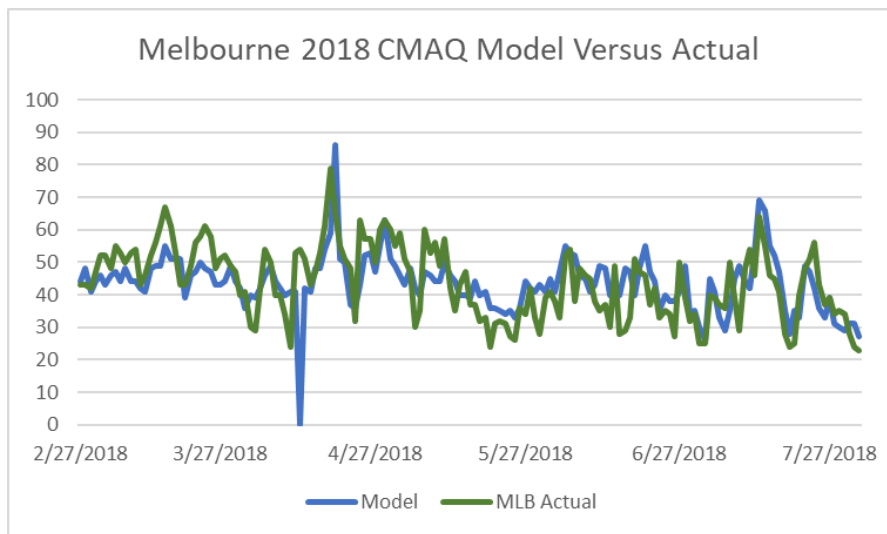
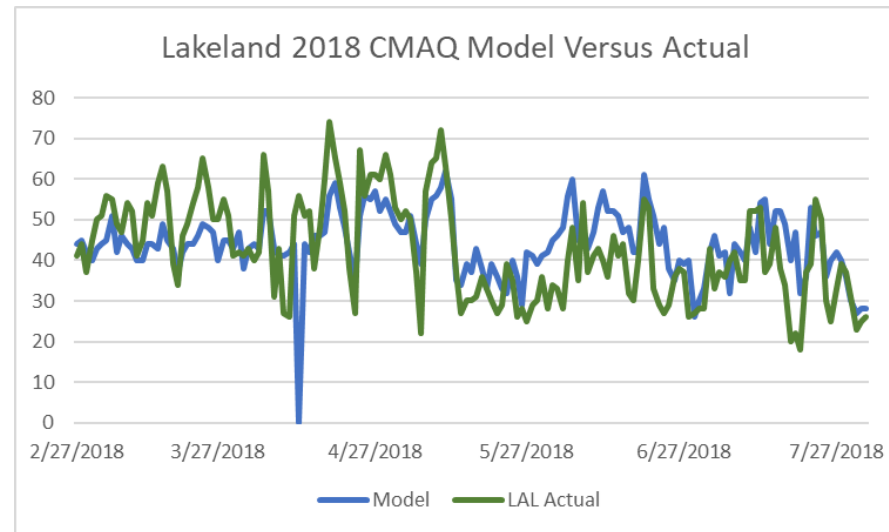
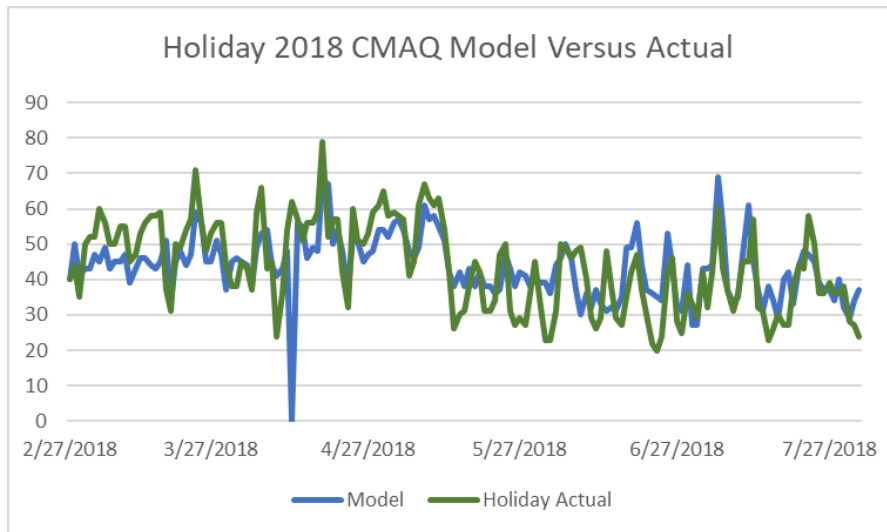


Gainesville 2018 CMAQ Model Versus Actual



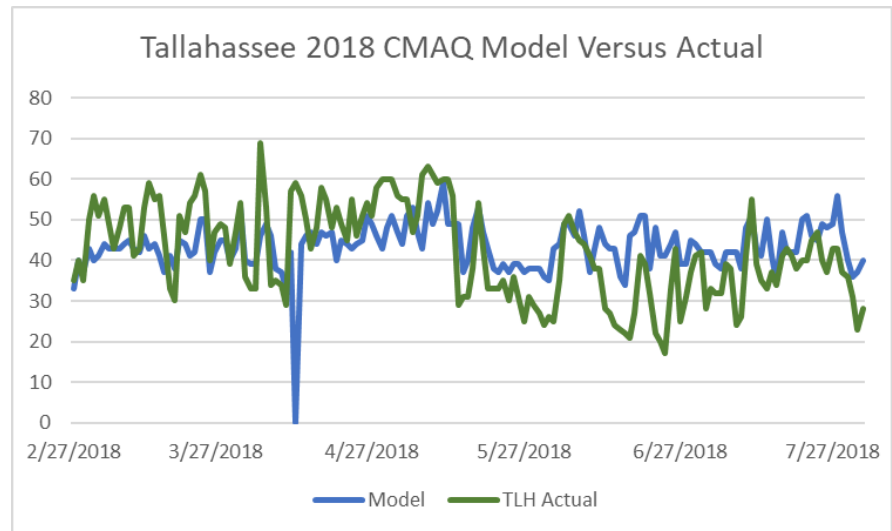
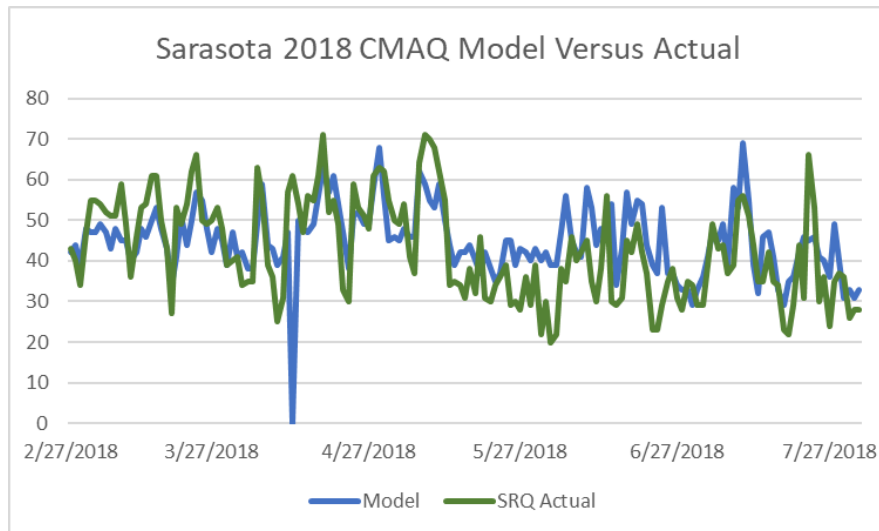
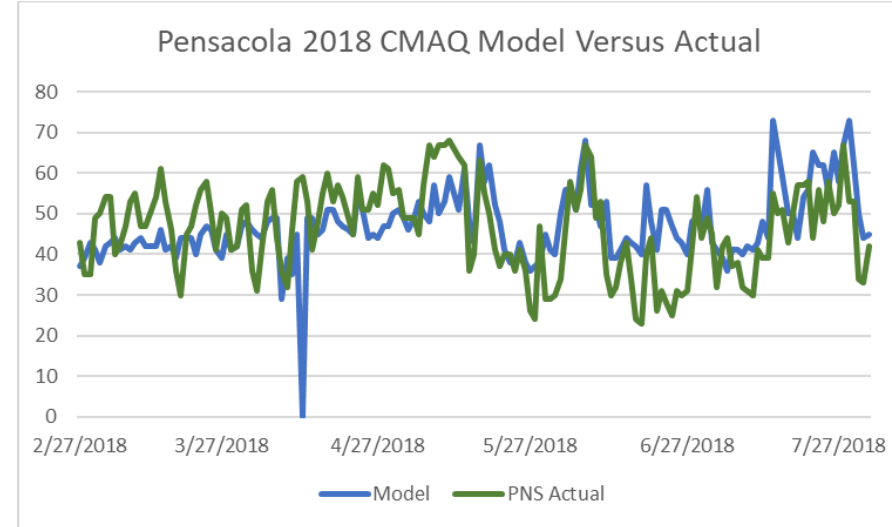
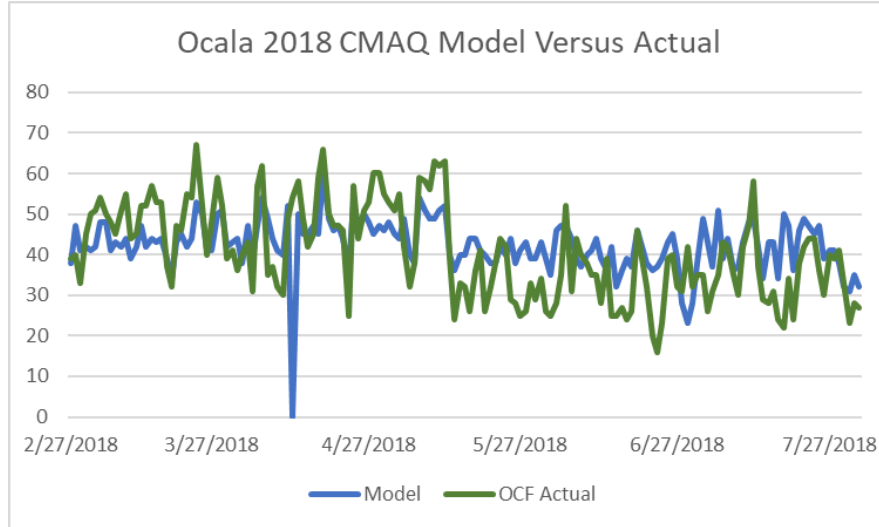


# Forecast Bias





# Forecast Bias





# Questions



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