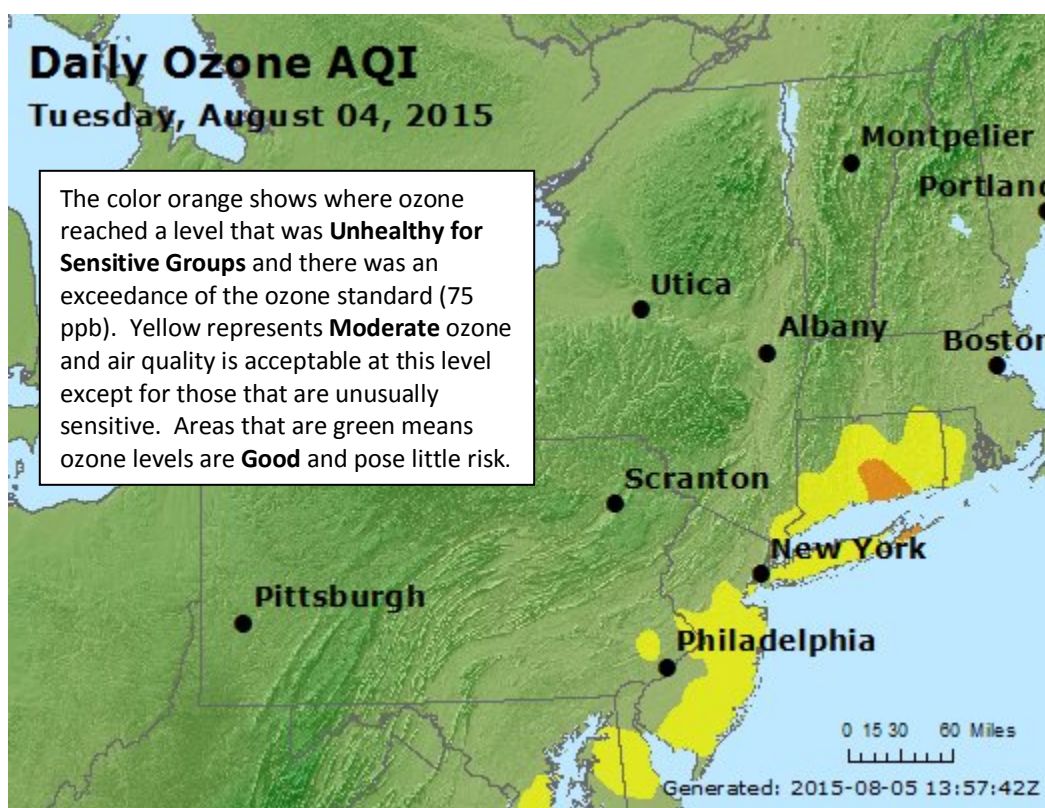


### Ozone National Ambient Air Quality Standard Health Exceedance on August 4, 2015

#### Exceedances Locations and Levels

On Tuesday, August 4, 2015, an exceedance of the 8-hour average 75 ppb NAAQS for ozone was recorded at three (3) Connecticut stations: Madison-Beach Road station with a concentration of 81 ppb, Stratford station with a concentration of 79, and Middletown station with a concentration of 77 ppb. The highest 1-hour average ozone concentration recorded on August 4, 2015 was 100 ppb at the Middletown station, which is below the 1-hour NAAQS of 120 ppb. The three Connecticut stations' ozone levels were the only exceedances in the 5 states that make up the Air Quality Control Region that includes New Jersey. Figure 1 shows the ozone AQI across the region for August 4.

**Figure 1. Ozone Air Quality Index for August 4, 2015**



Source: [www.airnow.gov](http://www.airnow.gov)

For ozone terminology definitions see NJDEP Air Quality Planning's Glossary and Acronyms webpage: <http://nj.gov/dep/baqp/glossary.html>

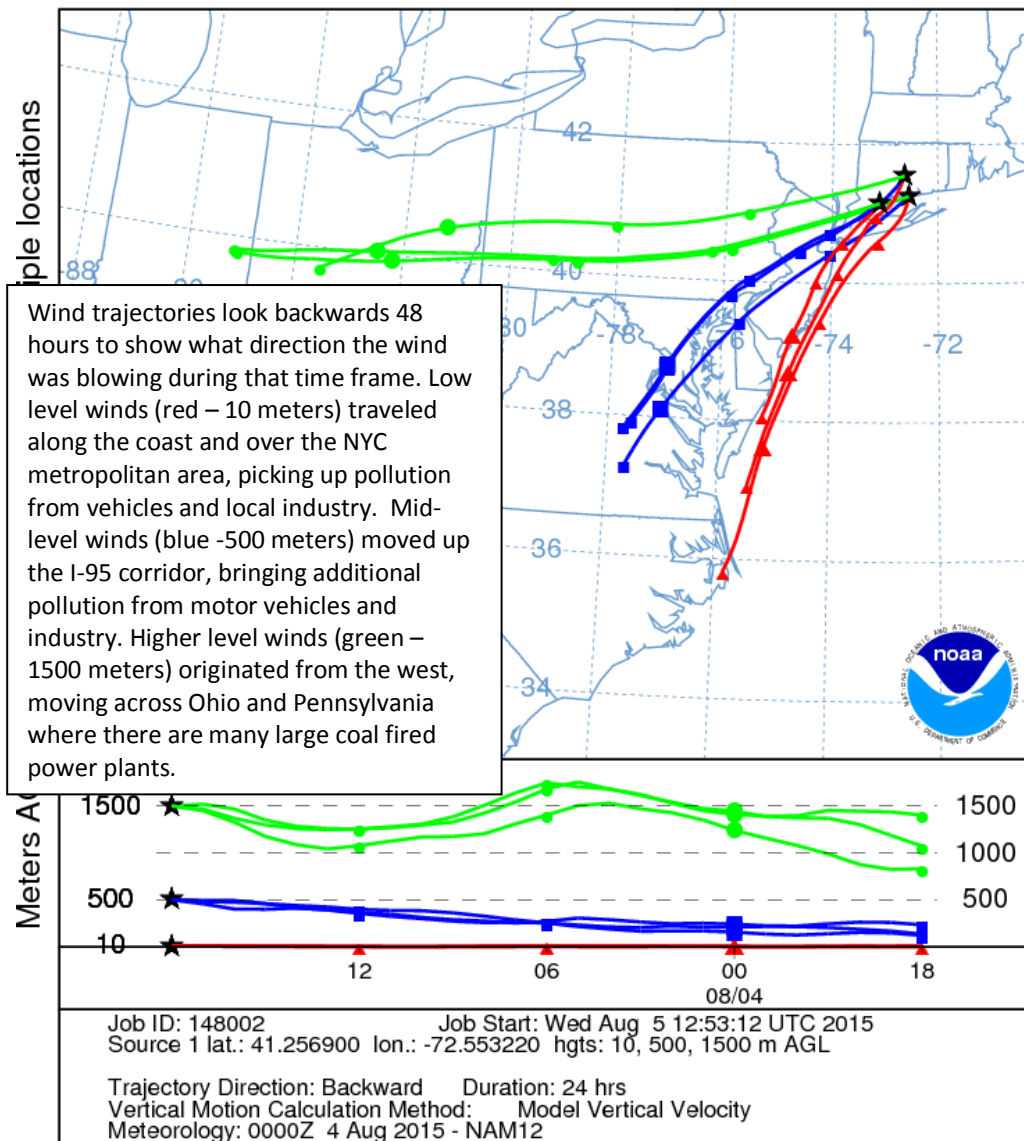
#### Weather

Meteorological data from across the region showed temperatures reached into the low 90s F, while winds were from the southwest ahead of a weakening cold front that approached the region from the northwest. Skies were mostly sunny across the region to promote ozone formation. Sufficient sunlight, combined with warmer temperatures and a southwest wind component are all features commonly seen with an ozone exceedance.

### Where Did the Air Pollution that Caused Ozone Come From?

Figure 2 shows the back trajectories for the monitored exceedances for August 4. Figure 2 illustrates that low level winds (red line) carried pollutants along the coast over the NYC metropolitan area, where there are significant amounts of air contaminant emissions from cars, trucks, and industry. Mid-level winds (blue line) followed a path along the I-95 corridor bringing additional pollution from cars, trucks, and industry. Higher level winds (green line) came from the west and traveled across Ohio and Pennsylvania, bringing pollution from large power plants. The combination of these winds caused air pollution from mobile sources, industry, and power plants to be transported into the area of Connecticut that experienced high ozone on August 4.

**Figure 2. 48-hour Back Trajectories for A, 2015**  
NOAA HYSPLIT MODEL  
Backward trajectories ending at 1800 UTC 04 Aug 15  
NAM Meteorological Data



### **How is Smog Created?**

Ground-level ozone, also known as smog, is an air pollutant known to cause a number of health effects and negatively impact air quality and the environment in the state of New Jersey. Smog is formed when oxides of nitrogen (NOx) and volatile organic compounds (VOCs) react in the presence of sunlight. Smog can irritate any set of lungs, but those with lung-related deficiencies should take extra precautions on bad ozone days.

### **Find Out About Air Quality Every Day**

The What's Your Air Quality Today? page at <http://www.nj.gov/dep/cleanairnj/> tells you how to sign up to receive notifications and find out when your local air has reached unhealthy ozone levels.