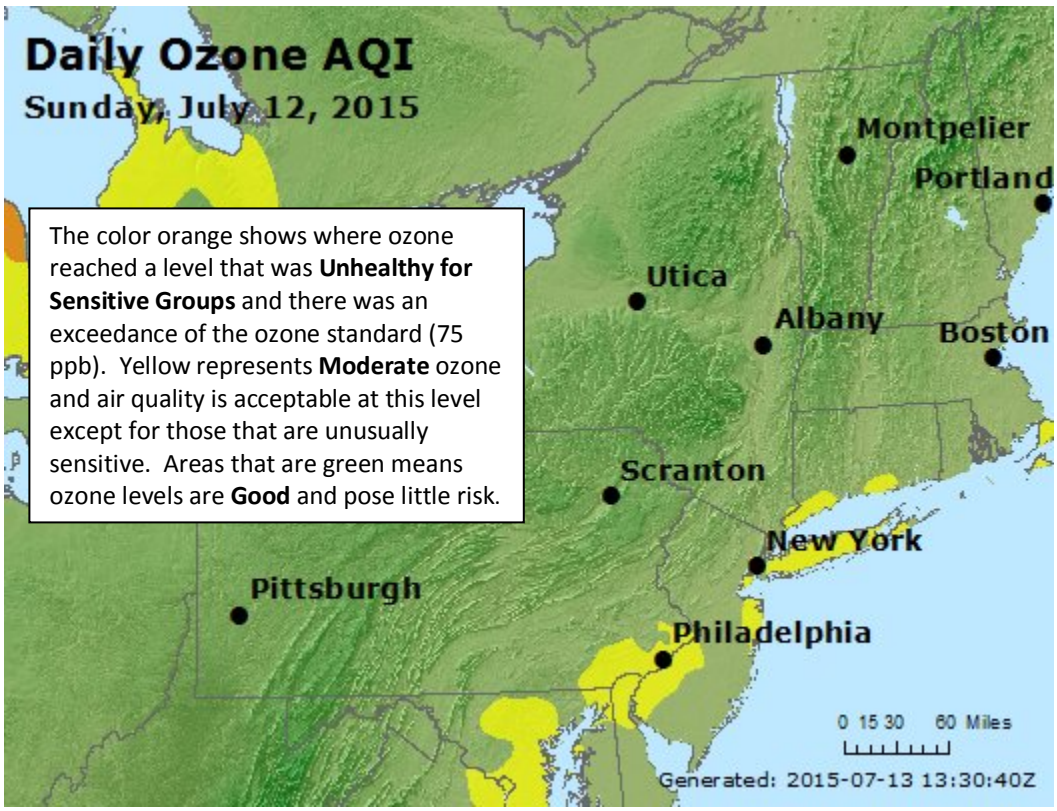
Ozone National Ambient Air Quality Standard Health Exceedance on July 12, 2015

Exceedances Locations and Levels

On Sunday, July 12, 2015, an exceedance of the 8-hour average 75 ppb NAAQS for ozone was recorded at one (1) New Jersey station: Camden Spruce Street with a concentration of 76 ppb. The highest 1-hour average ozone concentration recorded on July 12, 2015 was 89 ppb, also at Camden Spruce Street, which is below the 1-hour NAAQS of 120 ppb. The Camden Spruce Street, NJ ozone level was the only exceedance 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 July 12.

Figure 1. Ozone Air Quality Index for July 12, 2015



Source: www.airnow.gov

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

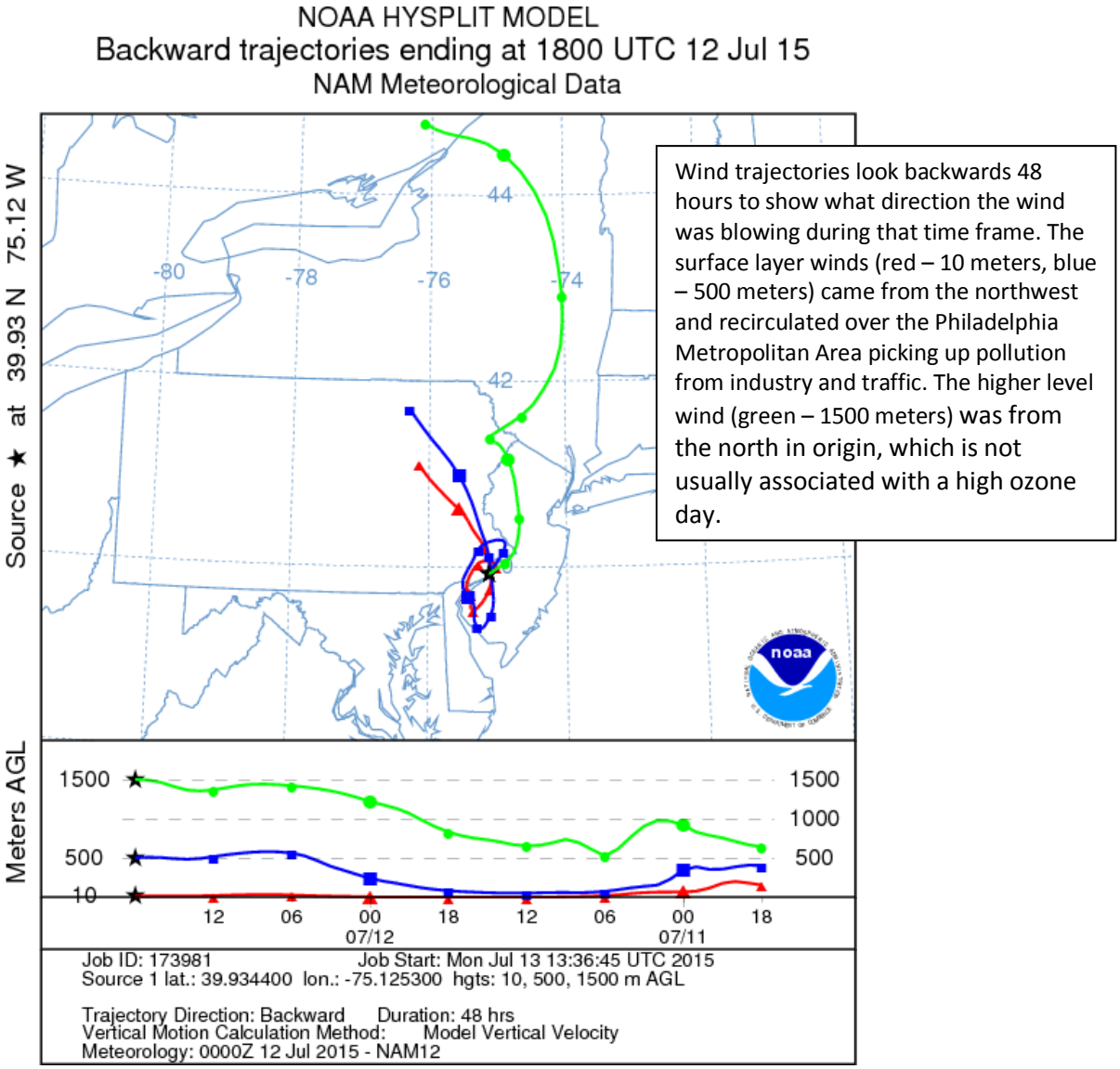
Weather

Meteorological data from Philadelphia International Airport shows temperatures reached 90° F, while winds were very light and from the southeast with an average wind speed of 5 mph. Skies were partly cloudy over New Jersey, but there was enough sunshine to promote ozone formation. Sufficient sunlight, combined with warmer temperatures are 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 exceedance for July 12. Figure 2 shows that low and mid-level winds (red and blue lines) were very light and variable over Camden after coming from the northwest. The low level winds traveled across The Philadelphia Metropolitan Area picking up locally generated pollution and then recirculated back over Philadelphia picking up additional pollution. Higher level winds (green line) show that winds were from the north in origin, which is not usually associated with a high ozone day.

Figure 2. 48-hour Back Trajectories for July 12, 2015



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.