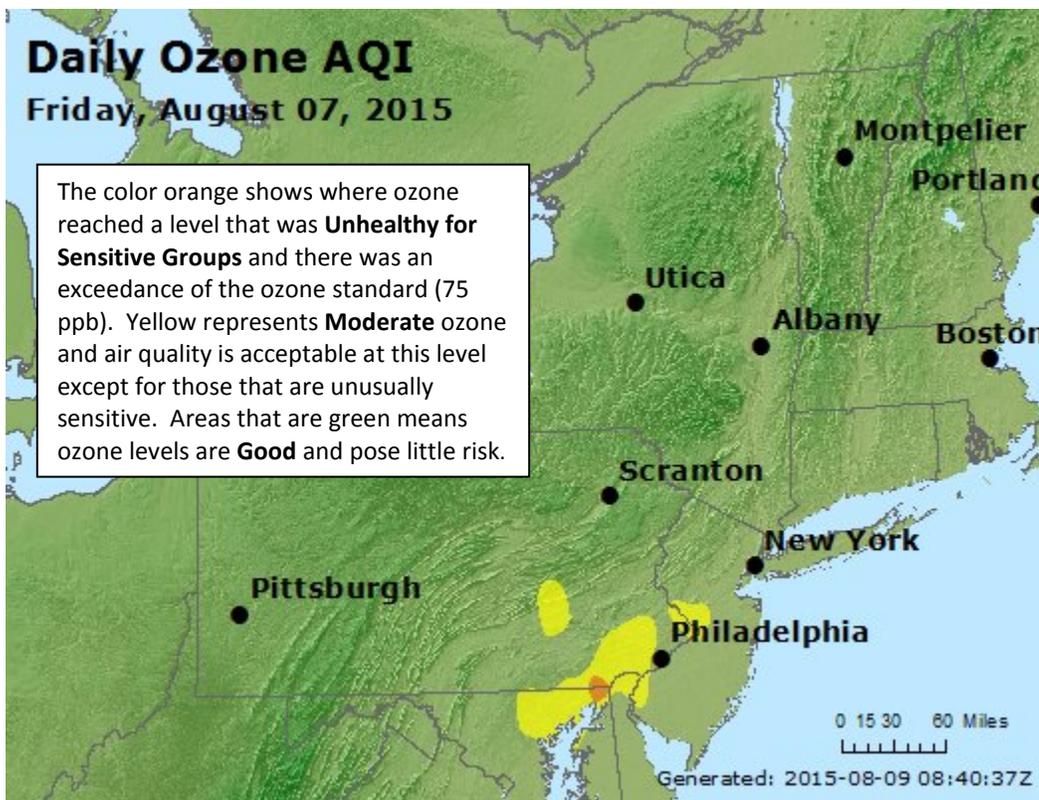


Ozone National Ambient Air Quality Standard Health Exceedance on August 7, 2015

Exceedances Locations and Levels

On Friday, August 7, 2015, an exceedance of the 8-hour average 75 ppb NAAQS for ozone was recorded at one (1) Maryland station: Fair Hill with a concentration of 79 ppb. The highest 1-hour average ozone concentration recorded on August 7, 2015 was 88 ppb, also at the Fair Hill station, which is below the 1-hour NAAQS of 120 ppb. The Fair Hill, MD station's ozone level was the only exceedance in the 5 states that make up the Air Quality Control Region that includes New Jersey. The highest 8-hour average ozone concentration recorded in New Jersey was 64 ppb at the Washington Crossing station. The highest 1-hour average ozone concentration recorded was 75 ppb at the Rider University station. Figure 1 shows the ozone AQI across the region for August 7.

Figure 1. Ozone Air Quality Index for August 7, 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>

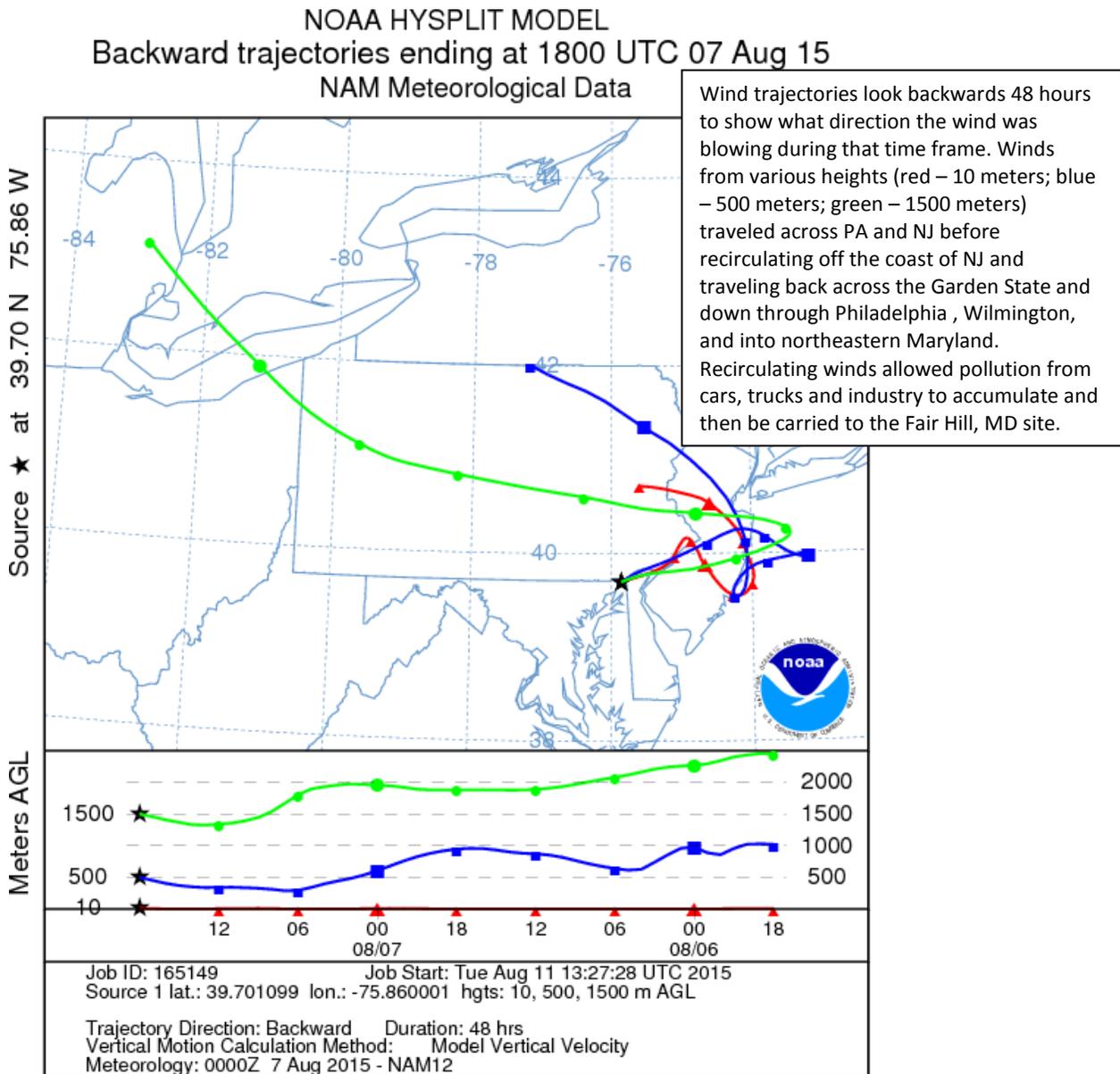
Weather

Meteorological data from the nearest weather station at New Castle Airport in Wilmington, Delaware showed temperatures reached 85° F, while winds were light and from the east/northeast. Skies were partly sunny across the region to promote ozone formation. Sufficient sunlight and warm 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 on August 7. Figure 2 illustrates that both surface level winds (red and blue lines) and higher level winds (green line) traveled through Pennsylvania and New Jersey before circling back around just off the New Jersey coast and heading back across the state and down through Philadelphia, Wilmington, and along the I-95 corridor into Maryland. Recirculating winds allowed polluted air from cars, trucks, and industry, picked up from the previous day, to mix with local emissions from mobile and stationary sources along the Pennsylvania /Delaware /Maryland border. The combination of recirculating winds and emissions from motor vehicles and industry caused the ozone exceedance in Fair Hill, Maryland on August 7.

Figure 2. 48-hour Back Trajectories for August 7, 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.