Ozone National Ambient Air Quality Standard Health Exceedances on July 11, 2025

Exceedance Locations and Levels

On Friday, July 11, 2025, there was one (1) exceedance in New Jersey of the National Ambient Air Quality Standard (NAAQS) for ozone (daily maximum 8-hour average of 70 ppb). See Table 1.

Table 1. New Jersey Ozone Concentrations on 7/11/2025

Site		8-Hr Maximum Average (ppb)
1	Ancora	35
2	Bayonne	49
3	Brigantine	39
4	Chester	66
5	Clarksboro	42
6	Colliers Mills	42
7	Columbia	63
8	Flemington	59
9	Leonia	62
10	Millville	37
11	Monmouth University	36
12	Ramapo	75
13	Rider University	53
14	Rutgers University	53
15	South Camden	52
16	Washington Crossing*	53

*The Washington Crossing station is operated and maintained by EPA as part of the nationwide Clean Air Status and Trends Network (CASTNET).

From the out-of-state stations within New Jersey's ozone nonattainment areas, there were no exceedances of the ozone NAAQS. See Table 2.

Table 2. Ozone Concentrations at Out-of-State Monitoring Stations in New Jersey's Ozone Nonattainment Areas on 7/11/2025

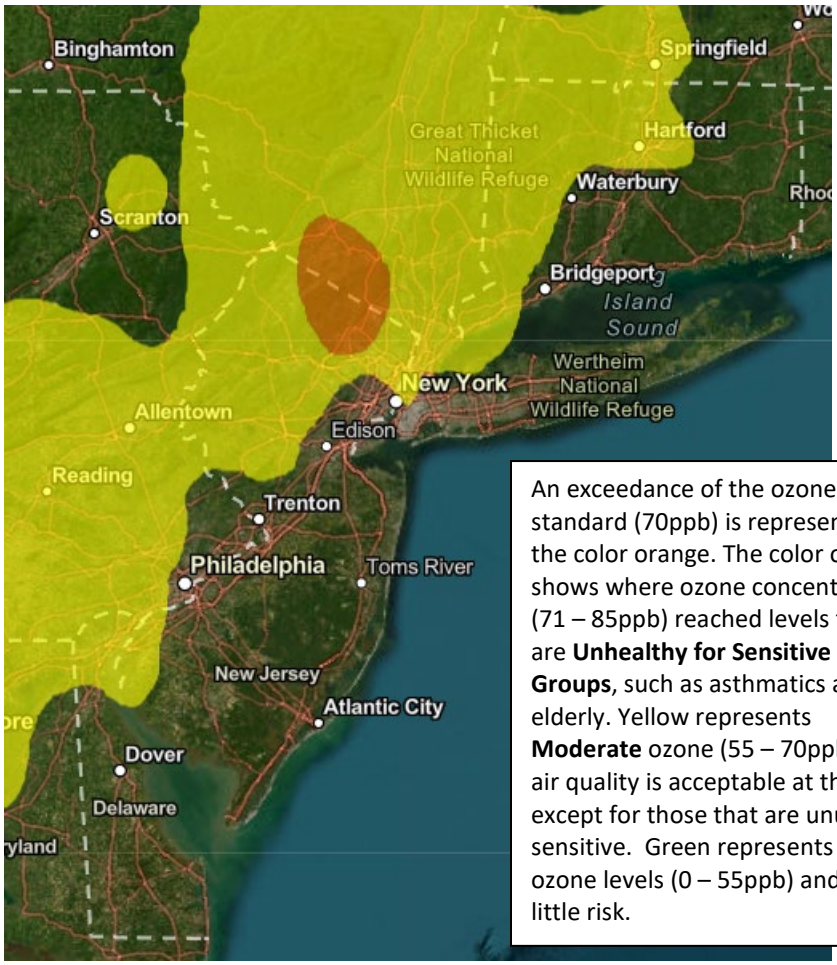
STATE	STATION	Daily Maximum 8-Hr Average (ppb)
CT	Danbury	61
CT	Greenwich	60
CT	Madison-Beach Road	46
CT	Middletown-CVH-Shed	51
CT	New Haven	49
CT	Stratford	50
CT	Westport	54
DE	BCSP (New Castle Co.)	67
DE	BELLFNT2 (New Castle Co.)	56
DE	KILLENS (Kent Co.)	45
DE	LEWES (Sussex Co.)	38
DE	LUMS 2 (New Castle Co.)	54
DE	MLK (New Castle Co.)	59
DE	SEAFORD (Sussex Co.)	44
MD	Fair Hill	66
NY	Babylon	41
NY	Bronx - IS52	49
NY	CCNY	60
NY	Flax Pond	46
NY	Fresh Kills	49
NY	Holtsville	40
NY	Pfizer Lab	60
NY	Queens	50
NY	Riverhead	46
NY	Rockland Cty	70
NY	White Plains	61
PA	BRIS (Bucks Co.)	50
PA	CHES (Delaware Co.)	59
PA	NEWG (Chester Co.)	69
PA	NORR (Montgomery Co.)	57
PA	LAB (Philadelphia Co.)	47
PA	NEA (Philadelphia Co.)	50
PA	NEW (Philadelphia Co.)	47
	TOTAL EXCEEDANCES	0

The number of days in 2025 on which exceedances of the ozone NAAQS were recorded for all the states within New Jersey's ozone nonattainment areas is summarized in Table 3.

Table 3. Number of Days Ozone NAAQS was Exceeded in NJ's Nonattainment Areas in 2025.

STATE	# of Days NAAQS was Exceeded January 1 – July, 2025 NAAQS = 70 ppb
Connecticut	13
Delaware	4
Maryland	1
New Jersey	10
New York	8
Pennsylvania	4

Figure 1. Ozone Air Quality Index for July 11, 2025



Source: www.airnow.gov

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

Weather

On Friday, July 11th, a single ozone exceedance was observed in northern New Jersey at the Ramapo monitor. A surface trough, which had slowly moved to the east from the previous day, was observed off the coast of New Jersey on Friday, allowing for light onshore winds. This trough moved slowly from west to east over New Jersey on Thursday, allowing for any polluted air to mix down to the surface. This previously polluted air, which had stagnated off the coast from Thursday, was able to make its way back over northern New Jersey due to recirculating winds. Ample sunshine at this specific site allowed for ozone concentrations to rise rapidly in the early afternoon hours before eventually giving way to cloudier skies in the evening hours. High pressure also sat over Pennsylvania, allowing for the convergence of winds and air in northern New Jersey. Partly sunny skies were observed throughout the rest of the state, which likely inhibited ozone levels from rising as quickly in other parts of New Jersey.

Where Did the Air Pollution that Caused Ozone Come From?

Figures 2, 3, and 4 show the back trajectories of different wind heights for the monitored exceedance(s) on this day. The figures illustrate where the air came from during the 48 hours preceding the 8-hour ozone standard exceedances. A transport analysis is provided with each figure shown below along with a map of the National Air Quality Index for the previous day (Figure 5). The monitoring station(s) that were chosen to model back trajectories are listed in Table 4.

Table 4. Monitoring Stations with an 8-hr Ozone Exceedance that were selected to Run 48-hr Back Trajectories

STATE	STATION	Daily Maximum 8-Hr Average (ppb)
NJ	Ramapo	75

Figure 2. 48-hour Back Trajectories for July 11, 2025 at 10 meters

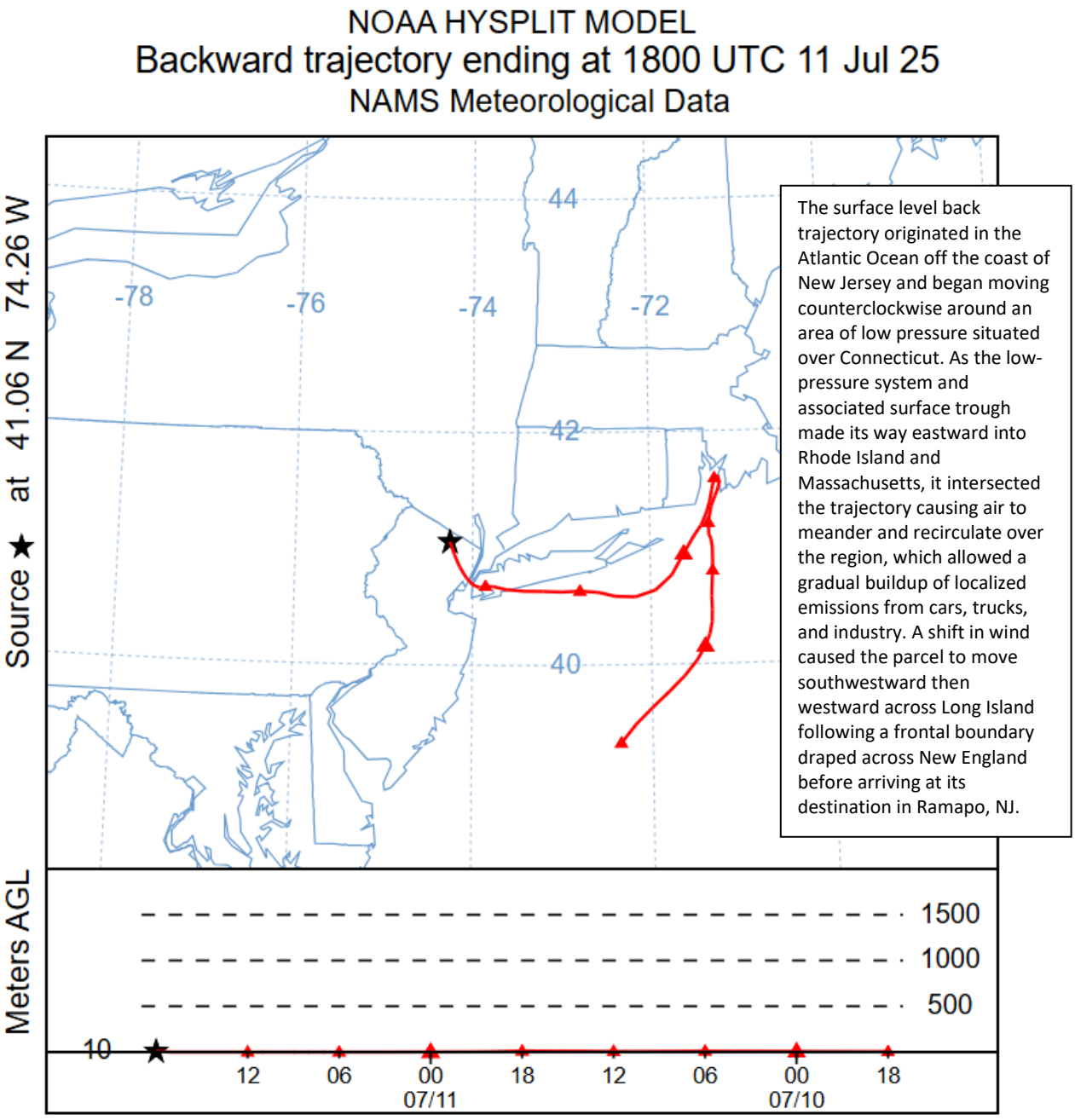


Figure 3. 48-hour Back Trajectories for July 11, 2025 at 500 meters

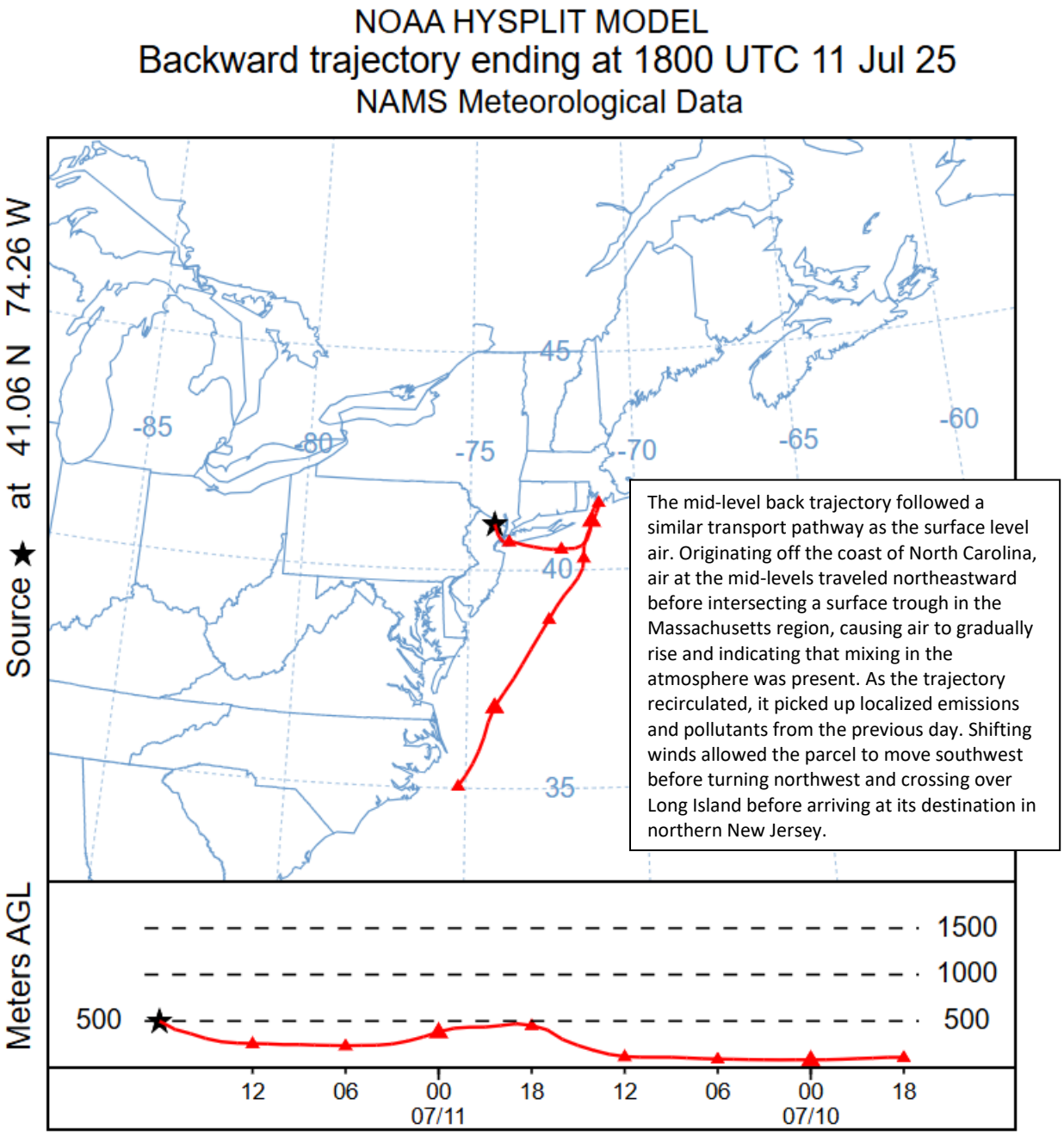


Figure 4. 48-hour Back Trajectories for July 11, 2025 at 1500 meters

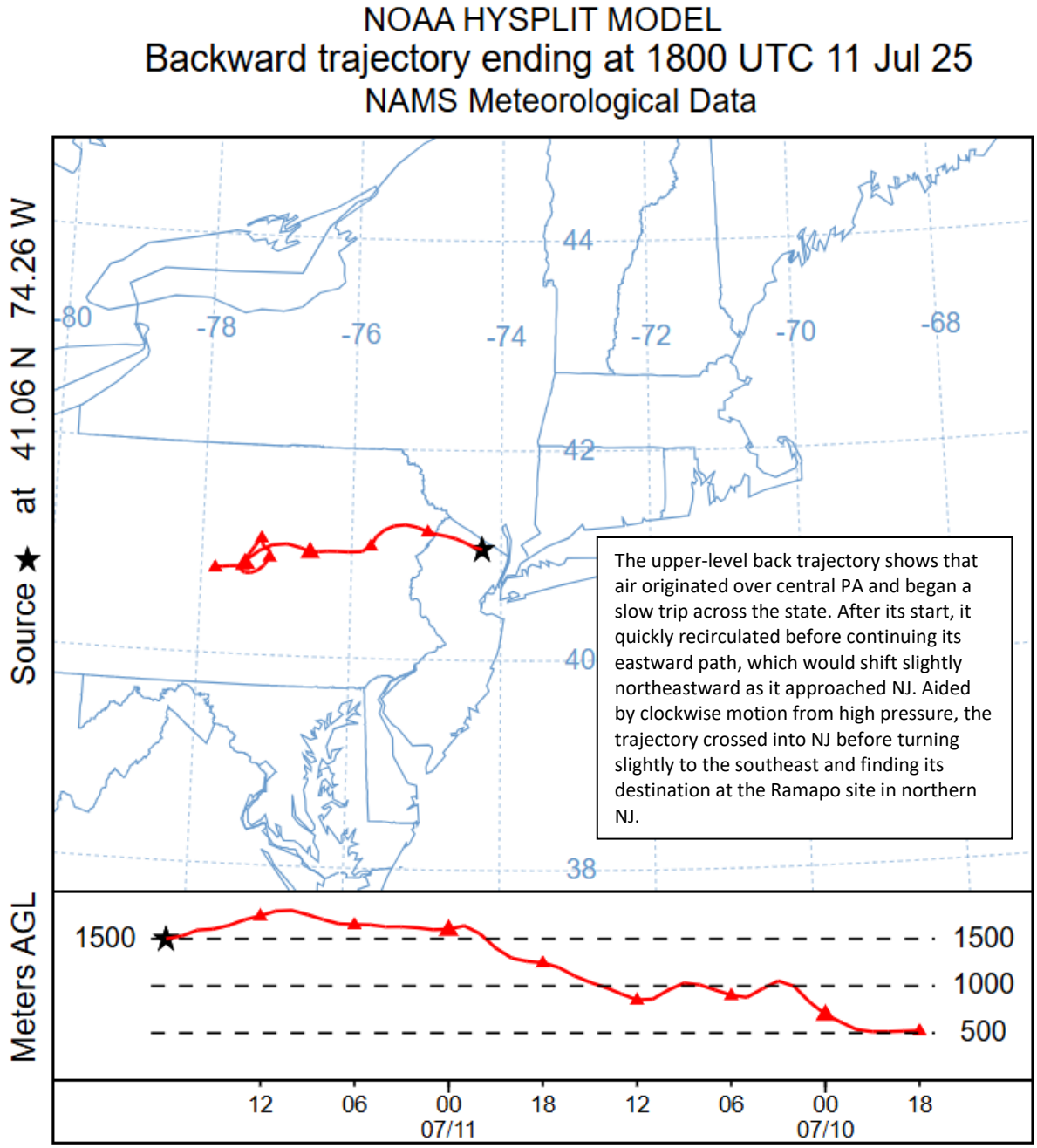
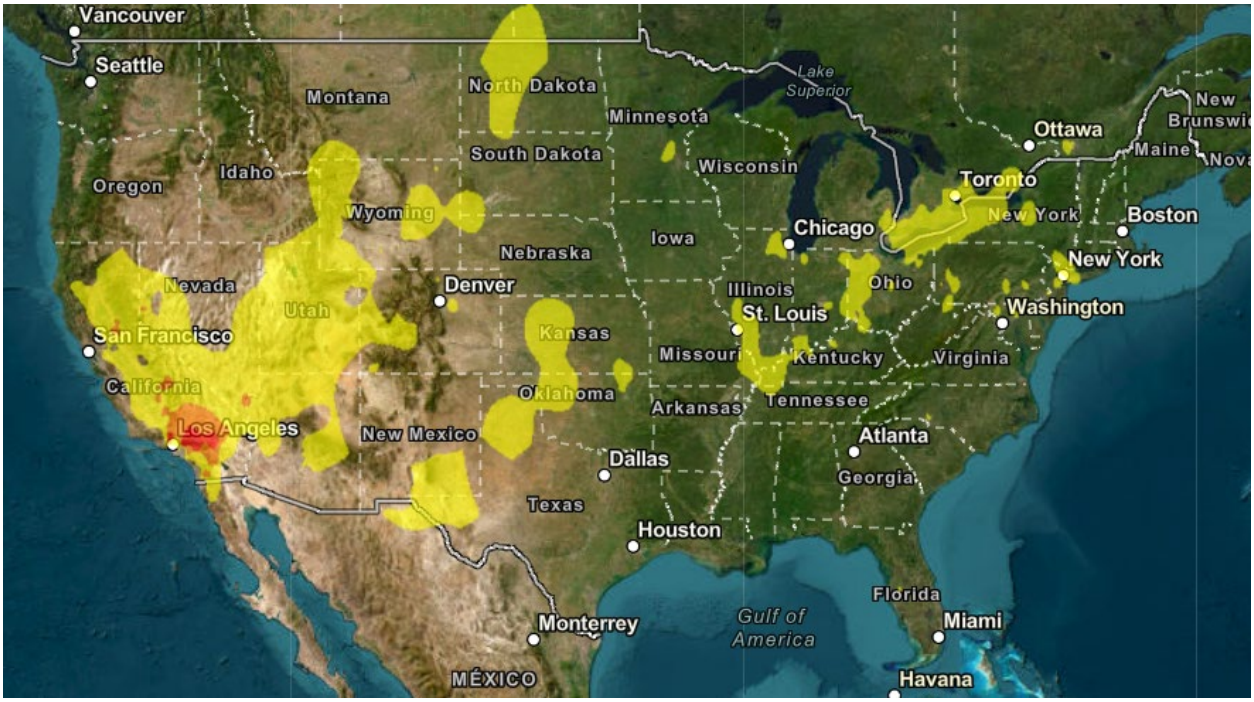


Figure 5. Air Quality Index for the United States on July 10, 2025



Source: www.airnow.gov

How is Ozone Created?

Ground-level ozone is an air pollutant known to cause several health effects and negatively impact air quality and the environment in New Jersey. Ozone is formed when oxides of nitrogen (NOx) and volatile organic compounds (VOCs) react in the presence of sunlight. Ozone can irritate any person's lungs, but the effect may be more pronounced for those with existing lung-related deficiencies, and therefore, one should take extra precautions on bad ozone days.

Find Out About Air Quality Every Day

Learn more about your local ozone air quality forecast by visiting the "What's Your Air Quality Today?" page at https://dep.nj.gov/airplanning/aqi-today/.