



# **Ozone Season Summary**

# **2008**

Sunil Kumar

MWAQC Meeting, COG

July 23, 2008



# Ozone Season Summary (2008)

## Peak 8-Hour Ozone Concentrations (ppb)

### MAY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1	2	3
				59	72	57
4	5	6	7	8	9	10
58	61	74	75	57	38	48
11	12	13	14	15	16	17
48	45	53	57	59	49	58
18	19	20	21	22	23	24
51	44	41	51	47	41	49
25	26	27	28	29	30	31
56	66	51	50	68	74	44

### JUNE

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
57	60	67	50	82	71	81
8	9	10	11	12	13	14
54	73	85	74	102	94	74
15	16	17	18	19	20	21
60	57	57	50	52	60	80
22	23	24	25	26	27	28
67	66	56	66	72	62	54
29	30					
53	49					

### JULY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
		50	64	74	64	58
6	7	8	9	10	11	12
52	61	72	40	64	75	76
13	14	15	16	17	18	19
69	64	85	92	104	97	66
20	21	22	23	24	25	26
69						

\* 2008 data is draft and subject to change.



# Ozone Season Summary (2008)

## 8-Hour Ozone Exceedance Days

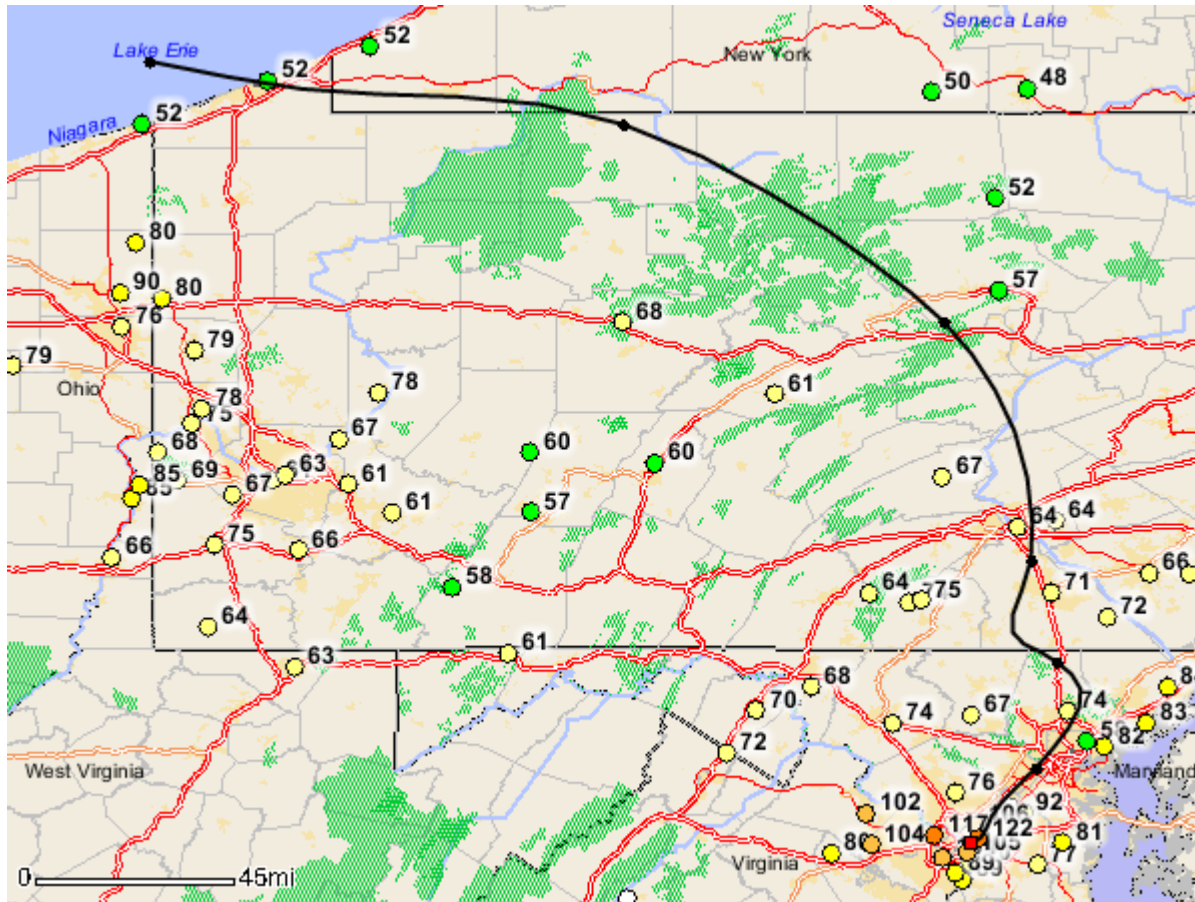
Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
6/5/08	1	Annandale	82
6/7/08	1	Prince George's EC	81
6/10/08	5	Rockville	85
<b>6/12/08</b>	<b>13</b>	<b>Lewinsville</b>	<b>102</b>
6/13/08	11	Rockville	94
6/21/08	5	Beltsville	80
7/12/08	1	Fredrick	76
7/15/08	4	Mt. Vernon	85
7/16/08	12	Mt. Vernon	92
<b>7/17/08</b>	<b>15</b>	<b>Arlington</b>	<b>104</b>
<b>7/18/08</b>	<b>13</b>	<b>Beltsville</b>	<b>97</b>

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# Wind Trajectories (Code Red Days)

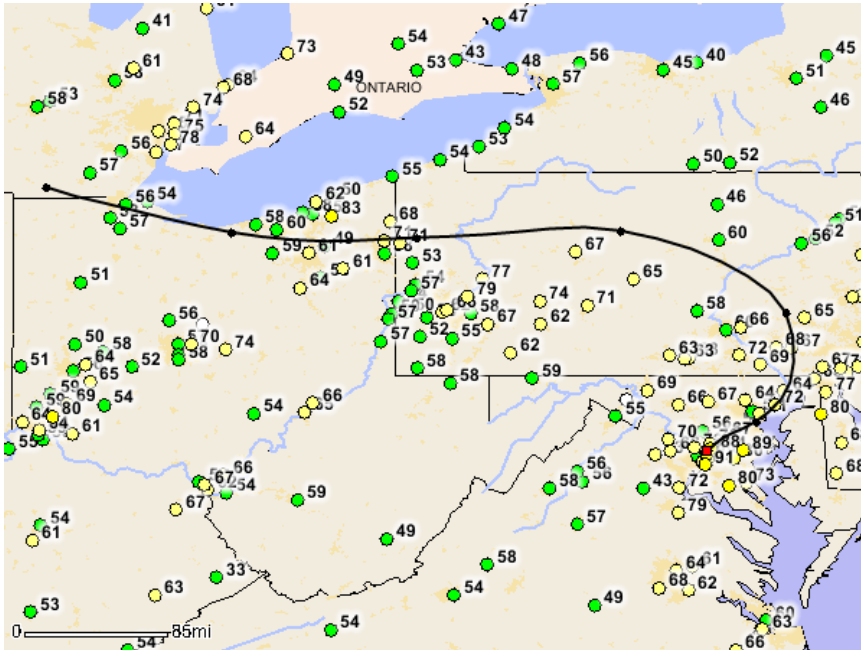
NOAA HYPLIT MODEL  
36-Hour Backward Trajectory ending at 3 PM June 12, 2008  
EDAS Meteorological Data



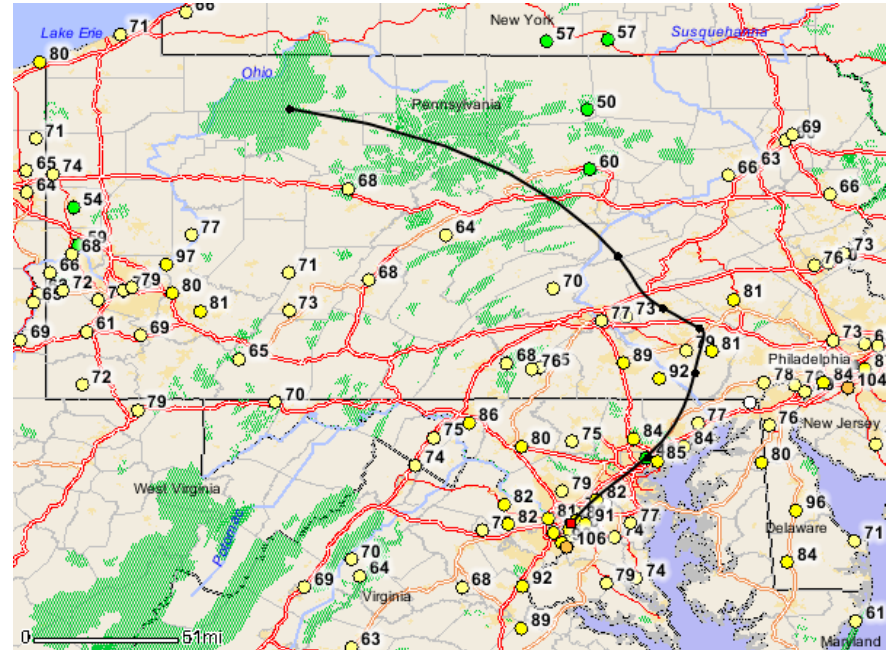


# Wind Trajectories (Code Orange Days)

**NOAA HYPLIT MODEL**  
**36-Hour Backward Trajectory ending at 3 PM July 15,**  
**2008**  
**EDAS Meteorological Data**



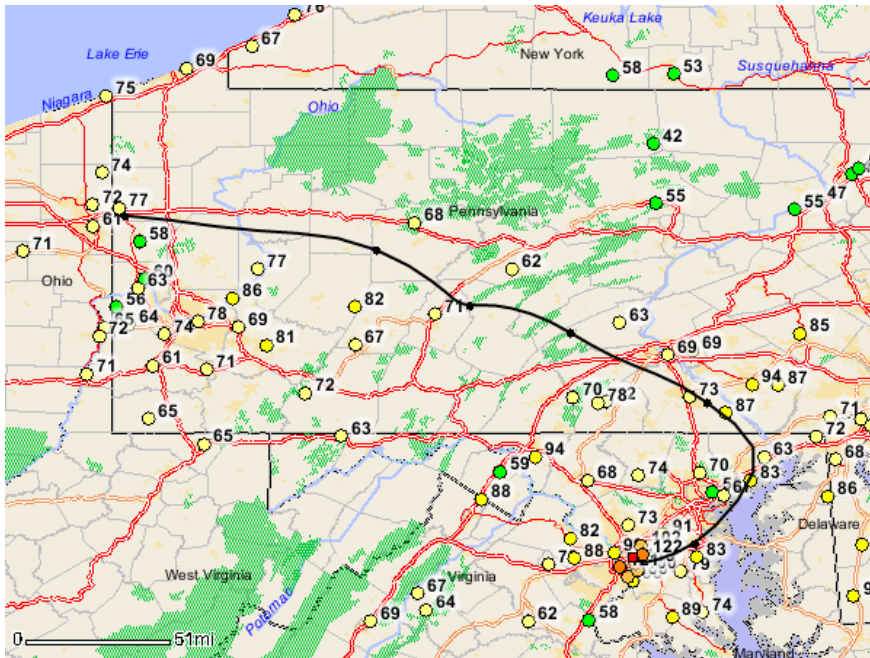
**NOAA HYPLIT MODEL**  
**36-Hour Backward Trajectory ending at 3 PM July 16,**  
**2008**  
**EDAS Meteorological Data**



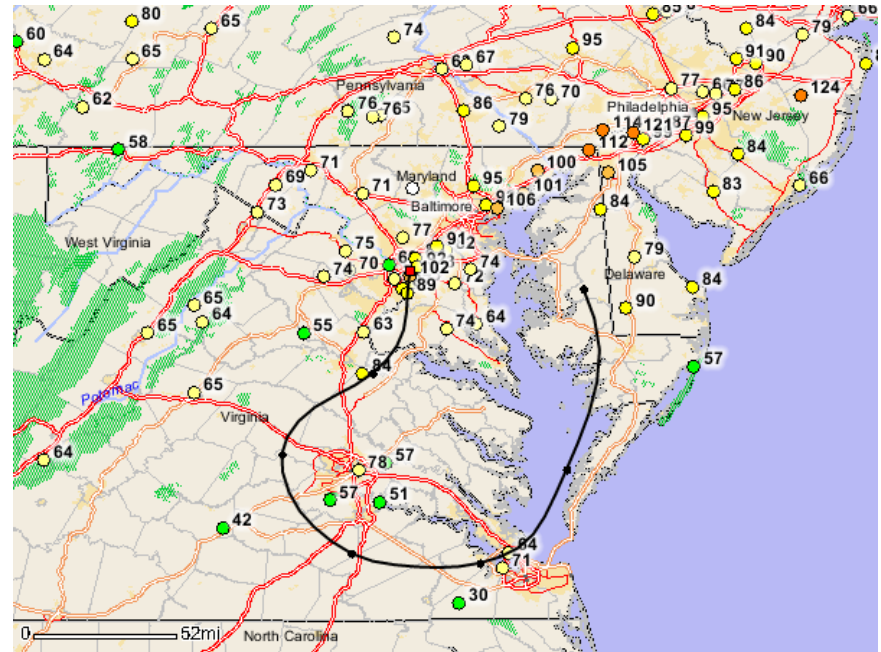


# Wind Trajectories (Code Red Days)

NOAA HYPLIT MODEL  
Backward Trajectory ending at 3 PM July 17, 2008  
EDAS Meteorological Data



NOAA HYPLIT MODEL  
Backward Trajectory ending at 3 PM July 18 2008  
EDAS Meteorological Data





# Daily Peak Fine Particle Concentrations (2008)

## 24-Hour PM2.5 Concentrations (ug/m3)

### MAY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1	2	3
				15.4	18.3	21.4
4	5	6	7	8	9	10
13.7	11.4	16.0	19.0	19.2	7.8	5.2
11	12	13	14	15	16	17
7.6	3.9	4.2	8.2	15.8	11.0	8.4
18	19	20	21	22	23	24
10.5	8.2	7.7	8.7	8.0	5.2	5.7
25	26	27	28	29	30	31
7.8	16.0	19.4	6.8	9.6	17.8	18.4

### JUNE

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
10.6	9.0	16.3	12.9	15.2	34.3	34.2
8	9	10	11	12	13	14
20.6	23.7	27.1	9.4	17.5	28.8	35.8
15	16	17	18	19	20	21
13.0	15.9	12.1	9.0	13.4	14.8	19.3
22	23	24	25	26	27	28
19.7	13.2	11.5	19.1	23.7	19.3	13.5
29	30					
9.7	10.7					

### JULY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
		8.3	15.5	20.7	21.6	25.9
6	7	8	9	10	11	12
22.0	15.8	17.2	14.4	15.4	25.2	34.5
13	14	15	16	17	18	19
16.2	13.5	28.4	31.7	34.7	38.2	15.1
20	21	22	23	24	25	26
18.7						
27	28	29	30	31		

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# Smoke Trajectory – June 14, 2008

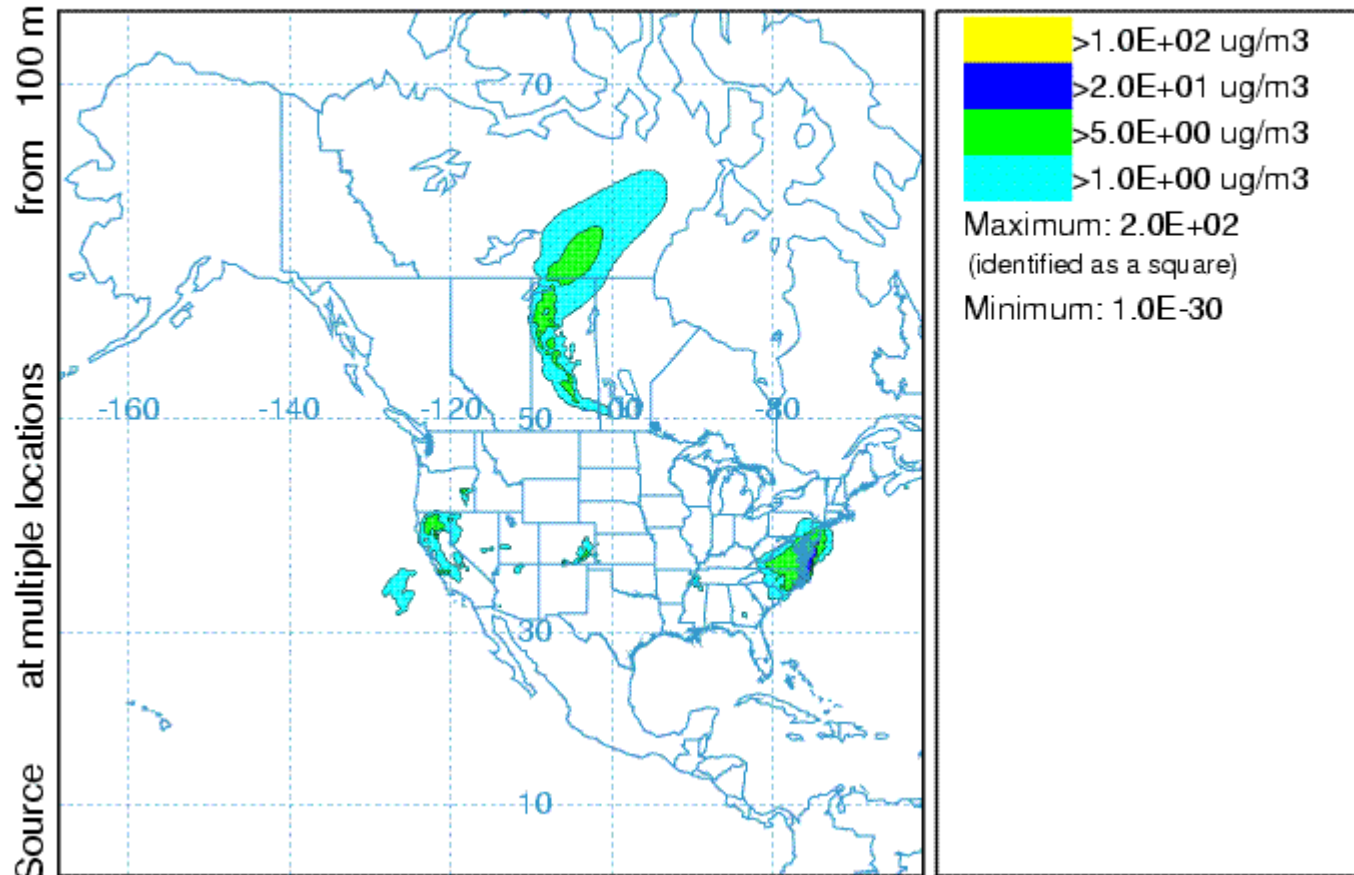
(24-Hour PM<sub>2.5</sub> Exceedance Day)

## ARL/NESDIS EXPERIMENTAL SMOKE FORECAST

Air Concentration (ug/m<sup>3</sup>) Layer Average 0 m and 5000 m

Integrated from 1100 14 Jun to 1200 14 Jun 08 (UTC)

PM<sub>2.5</sub> Release started at 0600 14 Jun 08 (UTC)

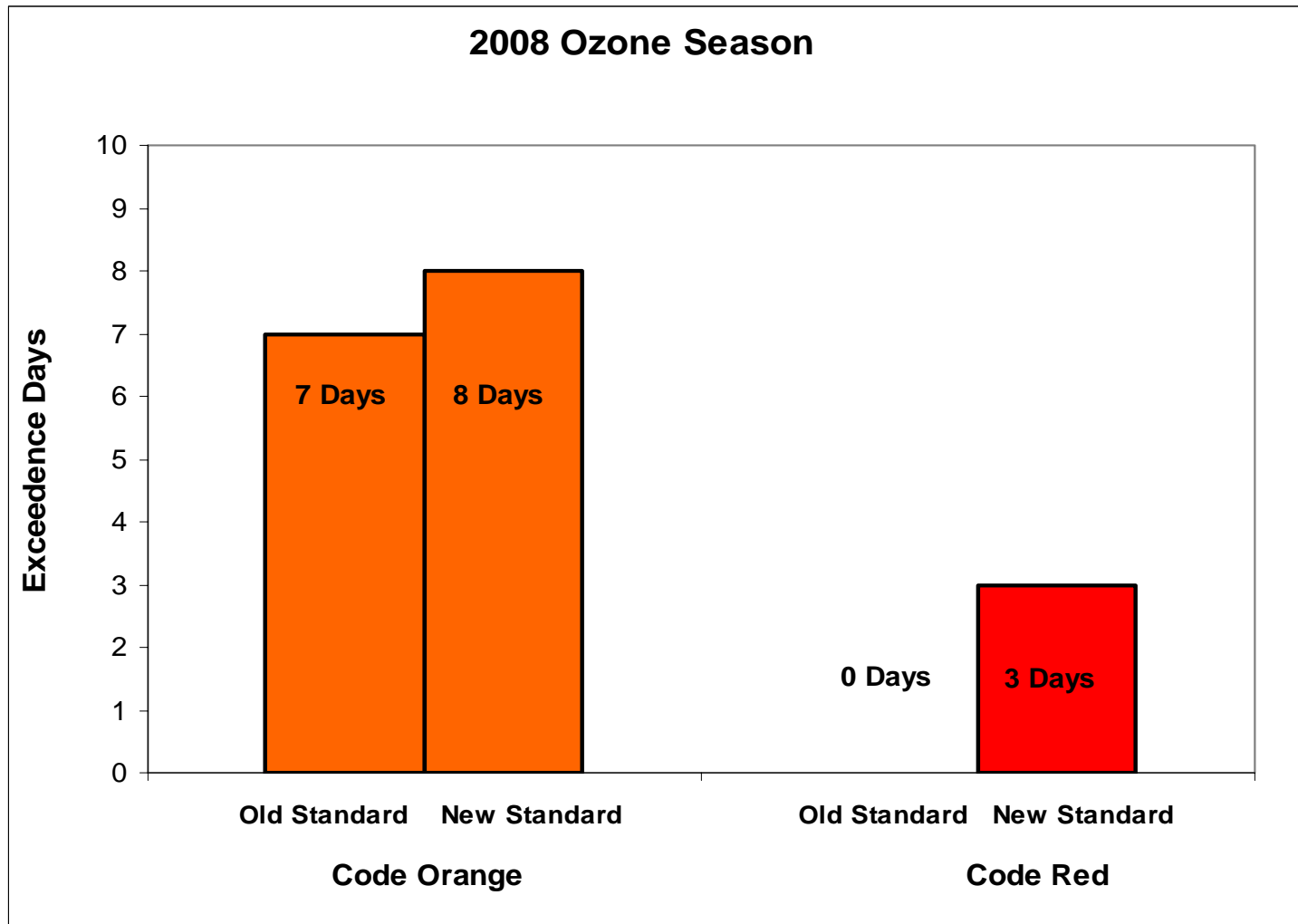






# Code Orange & Red Days – Old Vs. New AQI

(2008)



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