



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 | | | | | | |



Ozone Season Summary (2008)

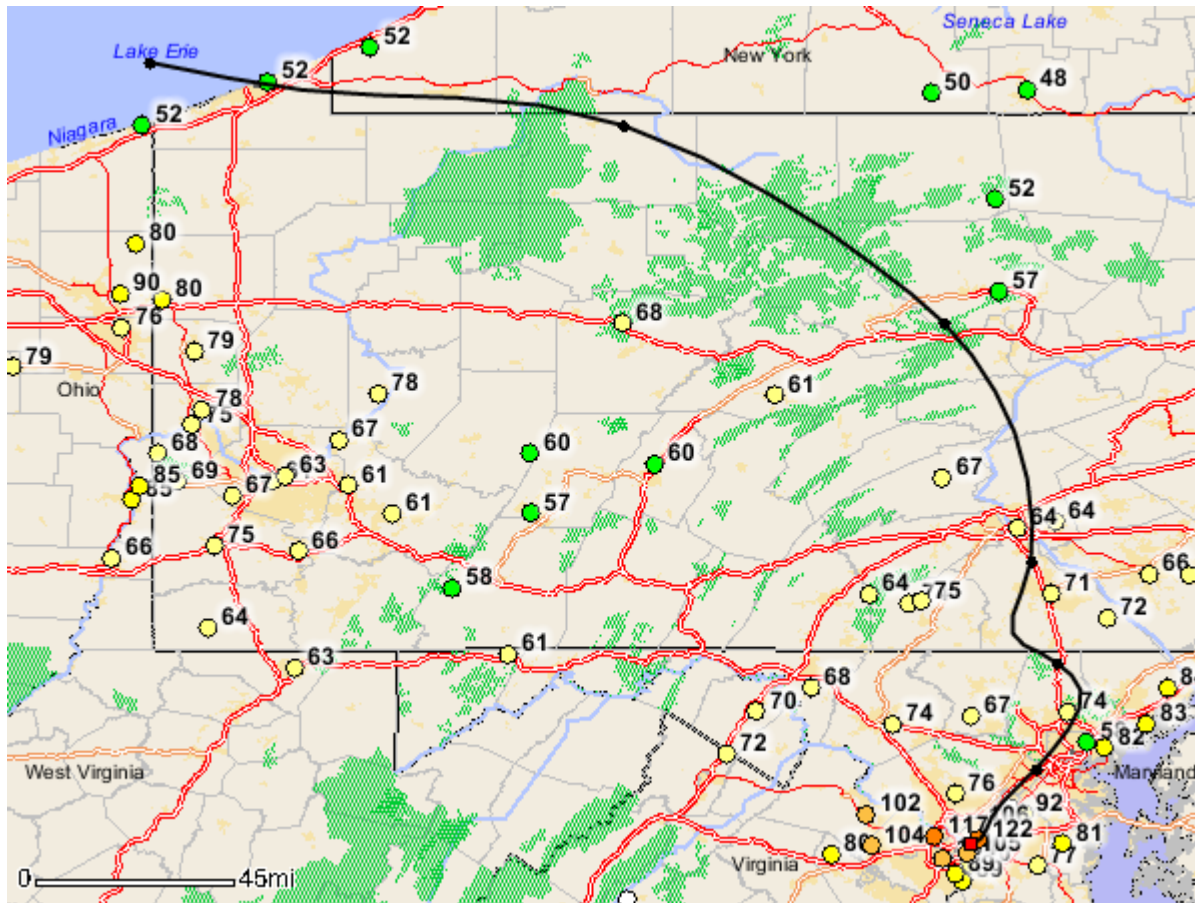
8-Hour Ozone Exceedance Days

| 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 |
| 6/12/08 | 13 | Lewinsville | 102 |
| 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 |
| 7/17/08 | 15 | Arlington | 104 |
| 7/18/08 | 13 | Beltsville | 97 |



Wind Trajectories (Code Red Days)

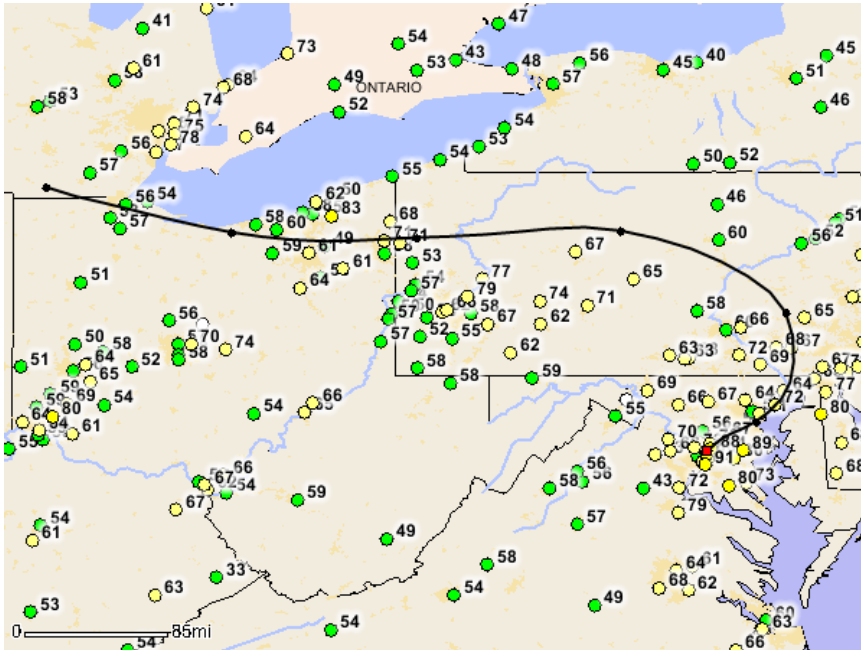
NOAA HYPLIT MODEL
36-Hour Backward Trajectory ending at 3 PM June 12, 2008
EDAS Meteorological Data



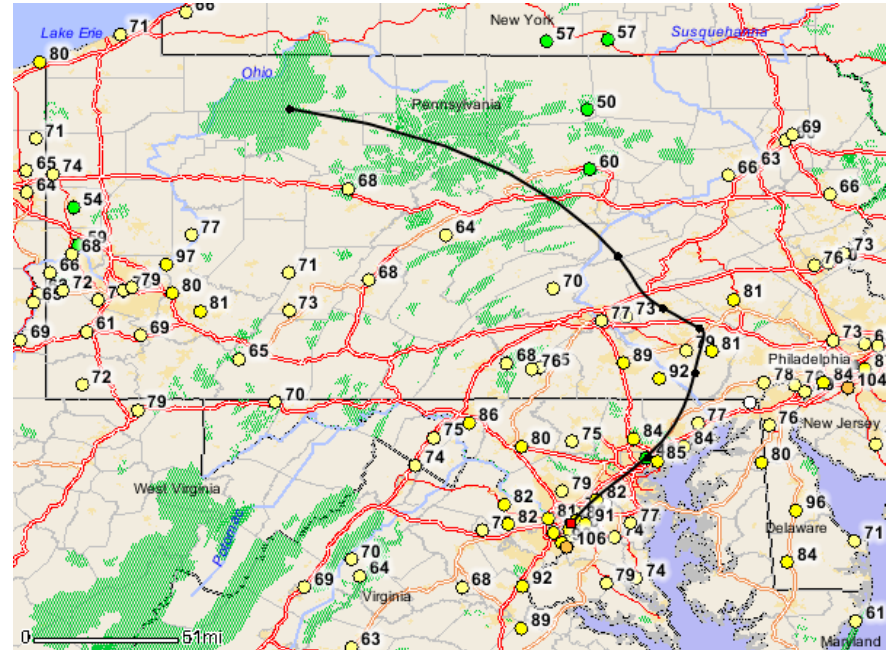


Wind Trajectories (Code Orange Days)

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



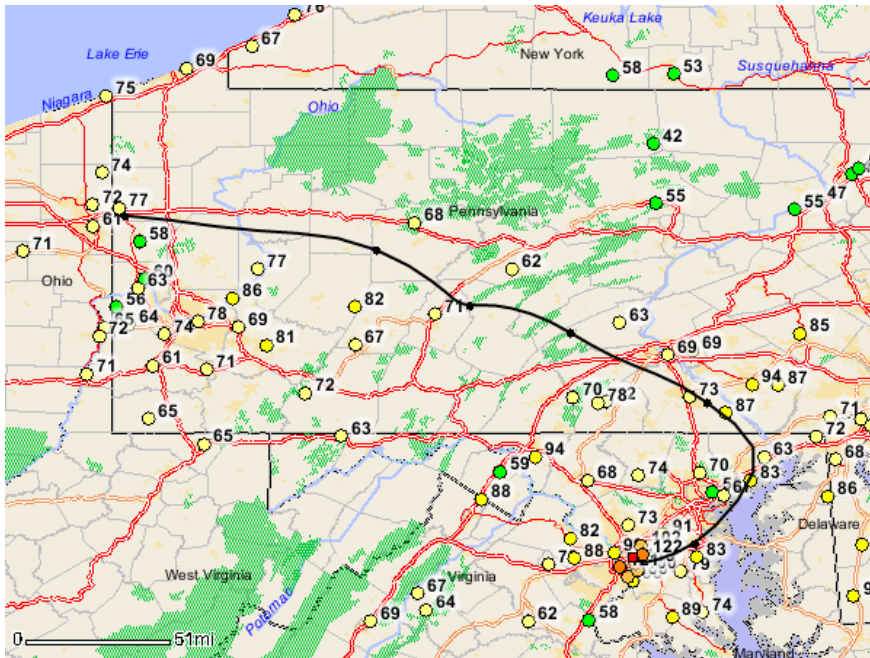
NOAA HYPLIT MODEL
36-Hour Backward Trajectory ending at 3 PM July 16,
2008
EDAS Meteorological Data



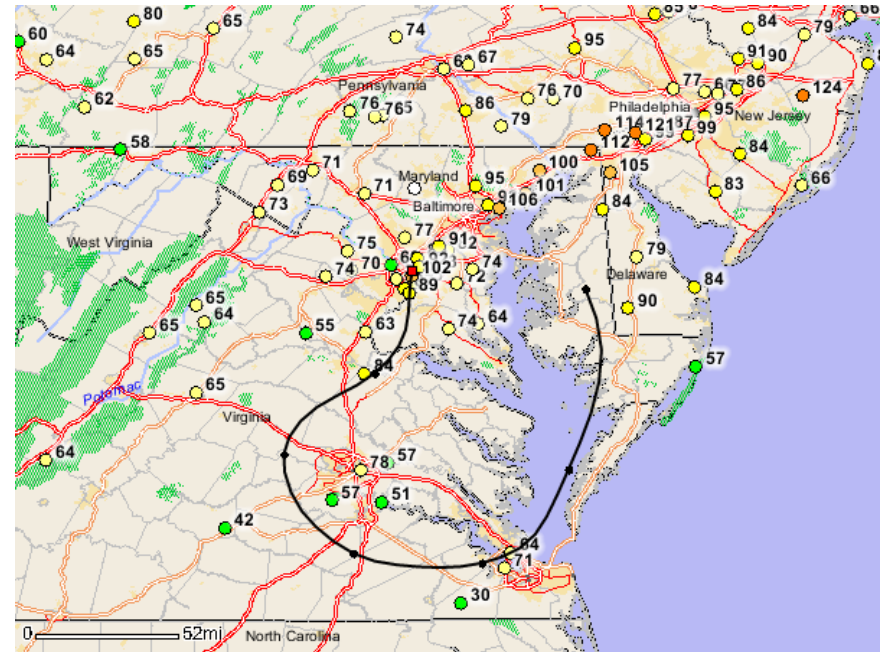


Wind Trajectories (Code Red Days)

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 | | | | | | |



Smoke Trajectory – June 14, 2008

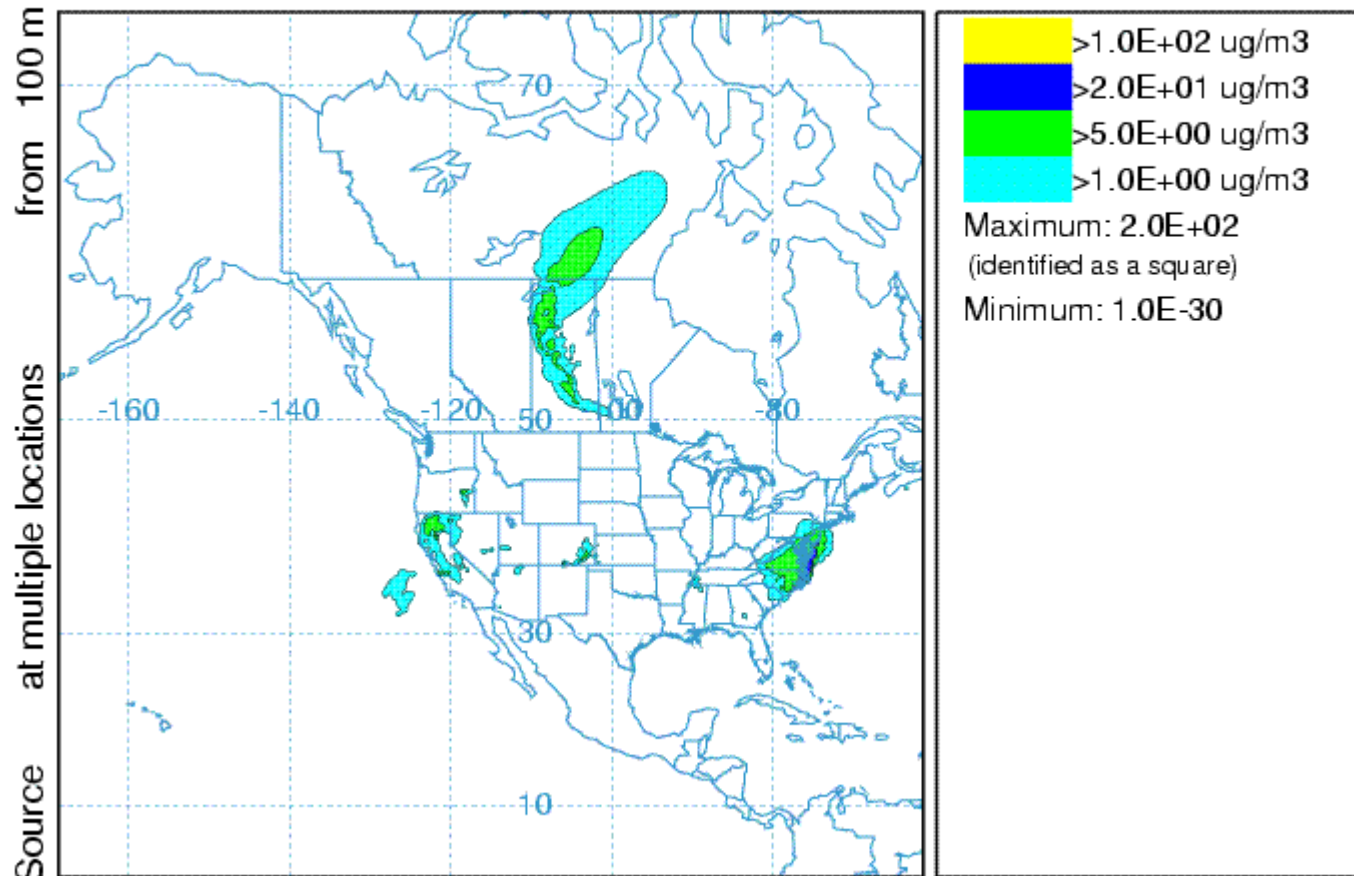
(24-Hour PM_{2.5} Exceedance Day)

ARL/NESDIS EXPERIMENTAL SMOKE FORECAST

Air Concentration (ug/m³) Layer Average 0 m and 5000 m

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

PM_{2.5} Release started at 0600 14 Jun 08 (UTC)





Code Orange & Red Days – Old Vs. New AQI

(2008)

