Item #2



Ozone Season Summary 2011

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MWAQC-TAC Meeting, COG

June 13, 2011



Ozone Season Summary

[As of June 9, 2011]

Daily Peak 8-hour Ozone Concentration (PPB)

Peak 8-Hour Ozone Concentrations (ppb)

Data based on the 8-hour standard set at 75 ppb. Since April 15, 2011, there have/has been:

- 1 Code Red Day
- 4 Code Orange Days
- 12 Code Yellow Days
- 39 Code Green Days

•Analysis is based on draft data until June 9, 2011. Data is subject to change.

			Apri			
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
2200					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
					57	46
17	18	19	20	21	22	23
53	59	52	60	53	44	36
24	25	26	27	28	29	30
45	55	35	32	53	50	44

Мау										
Sun	Mon	Tues	Wed	Thurs	Fri	Sat				
1	2	3	4	5	6	7				
39	55	52	40	53	58	55				
8	9	10	11	12	13	14				
56	54	53	65	61	41	35				
15	16	17	18	19	20	21				
48	53	50	45	42	49	60				
22	23	24	25	26	27	28				
59	55	51	75	73	58	49				
29	30	31	20110	200 B 1 B						
46	76	96								

June									
Sun	Mon	Tues	Wed	Thurs	Fri	Sat			
			1	2	3	4			
			74	72	60	73			
5	6	7	8	9	10	11			
69	75	76	95	93					

Washington Area-2011



2011 Ozone Exceedances (so far)

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
5/30/2011	1	Calvert County	76
5/31/2011	7	Franconia	96
6/7/2011	1	Beltsville	76
6/8/2011	11	Prince George's Equestrian Center	95
6/9/2011	8	Calvert County	93

* Analysis is based on draft data until June 9, 2011. Data is subject to change.

May 30th to May 31st and June 7th to June 9th Poor Air Quality Events

Bermuda Highs southwest of the Mid-Atlantic advected hot and humid air into the Metropolitan Washington Area.

The Bermuda Highs limited cloud coverage and allowed for record to near record high temperatures for each day.

Wind trajectories helped transport emissions from the Ohio River Valley into the Metropolitan Washington Area.

All three factors above led to conditions favorable for high ozone levels.

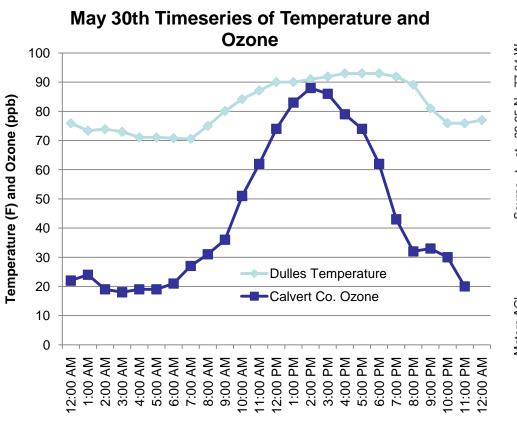


May 30th Code Orange

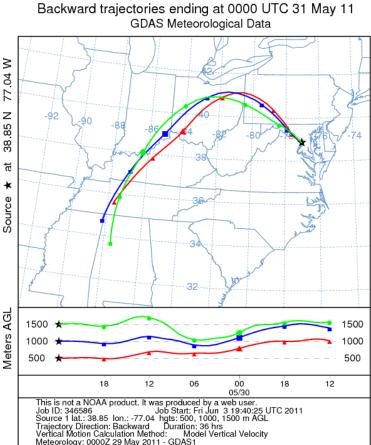
of Monitors in Exceedance: 1No Monitors in Code RedMaximum 8-Hour Ozone: 76 ppb (Calvert County)

Wind Trajectory at 8 PM (May 30th) (500m, 1000m, & 1500m)

NOAA HYSPLIT MODEL



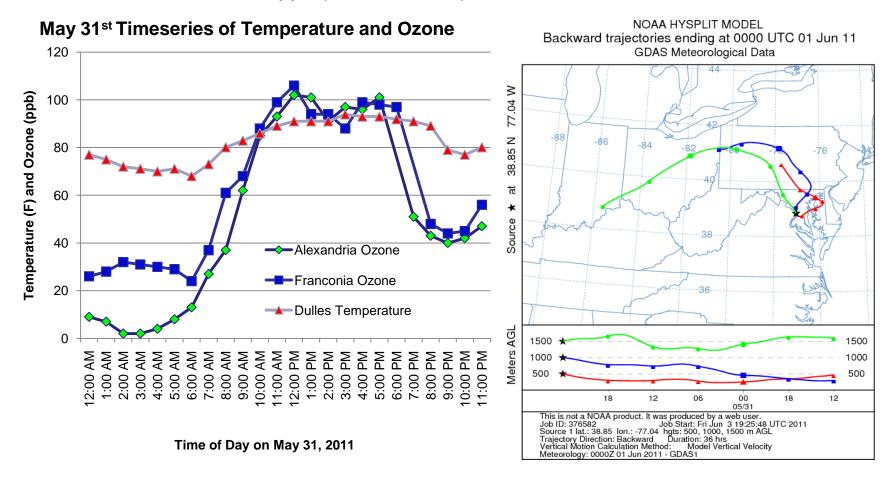
Time of Day on May 30, 2011





of Monitors in Exceedance: 71 Monitor in Code Red (Franconia, VA)Maximum 8-Hour Ozone: 96 ppb (Franconia, VA)

Wind Trajectory at 8 PM (May 31st) (500m, 1000m, & 1500m)





June 8th Code Orange

Wind Trajectory at 8 PM (June 8th) # of Monitors in Exceedance: 11 (500m, 1000m, & 1500m) No Monitor in Code Red Maximum 8-Hour Ozone: 95 ppb (Prince George's Co. Equestrian Center, MD) June 8th Timeseries of Temperature and NOAA HYSPLIT MODEL 120 Backward trajectories ending at 0000 UTC 09 Jun 11 Ozone GFSG Meteorological Data Hourly Ozone in ppb and Temperature in F 100 ≥ 77.04 80 Dulles Z 85 -86 temperature 88 60 at ★ Source 38 40 PG Eqn Ctr 36 20 О3 Meters AGL 0 1500 1500 6:00 AM 8:00 AM 10:00 AM 12:00 PM 2:00 PM A:00 PM 12:00 AM 2:00 AM 4:00 AM 6:00 PM 8:00 PM 10:00 PM 72:00 AM 1000 1000 500 500 18 12 06 00 18 12 06/08 This is not a NOAA product. It was produced by a web user. Job Start: Wed Jun 8 17:39:33 UTC 2011 Job ID: 18583 Time of Day on June 8th Source 1 lat.: 38.85 lon.: -77.04 hgts: 500, 1000, 1500 m AGL Trajectory Direction: Backward Duration: 36 hrs Vertical Motion Calculation Method: Model Vertical Velocity Meteorology: 1200Z 8 Jun 2011 - GFS



Number of Exceedance Days - 2008 Ozone Standard (75 ppb)

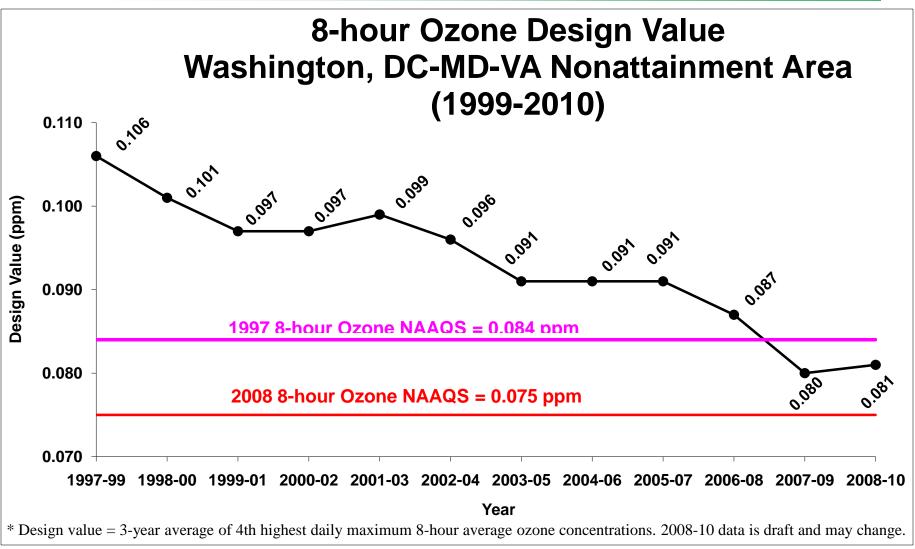
Breakdown of Code Orange, Red, and Purple Days 1997 - 2011

8-hr standard 84 ppb 8-hr standard 75 ppb set in 1997 revised in 2008 Number of Days

* 2011 data is preliminary and may

* 2011 analysis is based on draft data as of June 9, 2011 and is subject to change.







Fine Particle Summary

[As of June 9, 2011]

Daily Peak 24-hour $PM_{2.5}$ Concentration ($\mu g/m^3$)

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

Data based on the 24-hour standard set at 35.5 ug/m3. Since April 15, 2011, there have/has been:

13 Code Yellow Days

43 Code Green Days

			Apri			
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
					11.3	7.3
17	18	19	20	21	22	23
6.3	12.8	17.3	13.8	8.3	7.7	8.7
24	25	26	27	28	29	30
14.1	13.9	8.9	8.2	10.4	7.8	6.7

		ing	Area	-201	1						
			Мау								
Irs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat		
a.	1	2	1	2	3	4	5	6	7		
			9.7	12.0	14.1	6.1	7.8	10.1	10.4		
	8	9	8	9	10	11	12	13	14		
			12.2	9.1	8.0	9.6	14.5	15.1	10.2		
1	15	16	15	16	17	18	19	20	21		
1	11.3	7.3	9.8	11.8	10.7	9.2	8.4	14.4	10.3		
1	22	23	22	23	24	25	26	27	28		
3	7.7	8.7	15.3	20.5	16.1	17.5	24.4	15.2	9.1		
3	29	30	29	30	31		5,4		1		
.4	7.8	6.7	 14.2	<mark>23.8</mark>	<mark>31.8</mark>						

June										
Sun	Mon	Tues	Wed	Thurs	Fri	Sat				
			1	2	3	4				
			33.3	9.5	6.5	12.2				
5	6	7	8	9	10	11				
and the second	40.0	04.0	00.0	31.5		- 14 - 14 - 14 - 14 - 14 - 14 - 14 - 14				

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