Item #2

Ozone Season Summary 2012

Sunil Kumar

MWAQC-TAC Call

July 10, 2012

Ozone Season Summary

[As of July 08, 2012]

Peak 8-Hour Ozone Concentrations (ppb)

3 Code Red Days

11 Code Orange Days

30 Code Yellow Days

55 Code Green Days

April

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
46	68	55	59	43	52	55
8	9	10	11	12	13	14
62	54	59	33	41	52	63
15	16	17	18	19	20	21
67	61	50	31	56	65	65
22	23	24	25	26	27	28
64	40	57	61	54	65	52
29	30					
58	58					

May

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
		57	45	53	49	57
6	7	8	9	10	11	12
48	50	49	61	61	58	70
13	14	15	16	17	18	19
64	47	47	70	55	64	75
20	21	22	23	24	25	26
65	34	47	52	68	58	55
27	28	29	30	31		
47	49	46	69	80		

June

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
					53	52
3	4	5	6	7	8	9
58	42	44	50	53	57	74
10	11	12	13	14	15	16
88	65	35	56	59	62	63
17	18	19	20	21	22	23
53	33	84	86	96	77	65
24	25	26	27	28	29	30
72	65	45	52	79	110	72

July

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
73	67	81	80	91	98	81
8	9	10	11	12	13	14
86						
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

•**Analysis is based on draft data until July 08, 2012. Data is subject to change.**

2012 Ozone Exceedances (As of July 08)

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
5/31/2012	1	Calvert	80
6/10/2012	8	McMillan	88
6/19/2012	5	Arlington	86
6/20/2012	8	Alexandria	86
6/21/2012	9	Alexandria / Franconia	96
6/22/2012	2	Southern Maryland	77
6/28/2012	2	McMillan Reservoir	79
6/29/2012	13	Calvert	110

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2012 Ozone Exceedances (As of July 08)

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
7/03/2012	3	Prince Georges	81
7/04/2012	2	Prince Georges	80
7/05/2012	6	Calvert	91
7/06/2012	7	Franconia	106
7/07/2012	5	Prince Georges	81
7/08/2012	7	Prince Georges	86

What Caused Ozone Episodes ?

❖ High pressure system continuing for several days caused the following in our region -

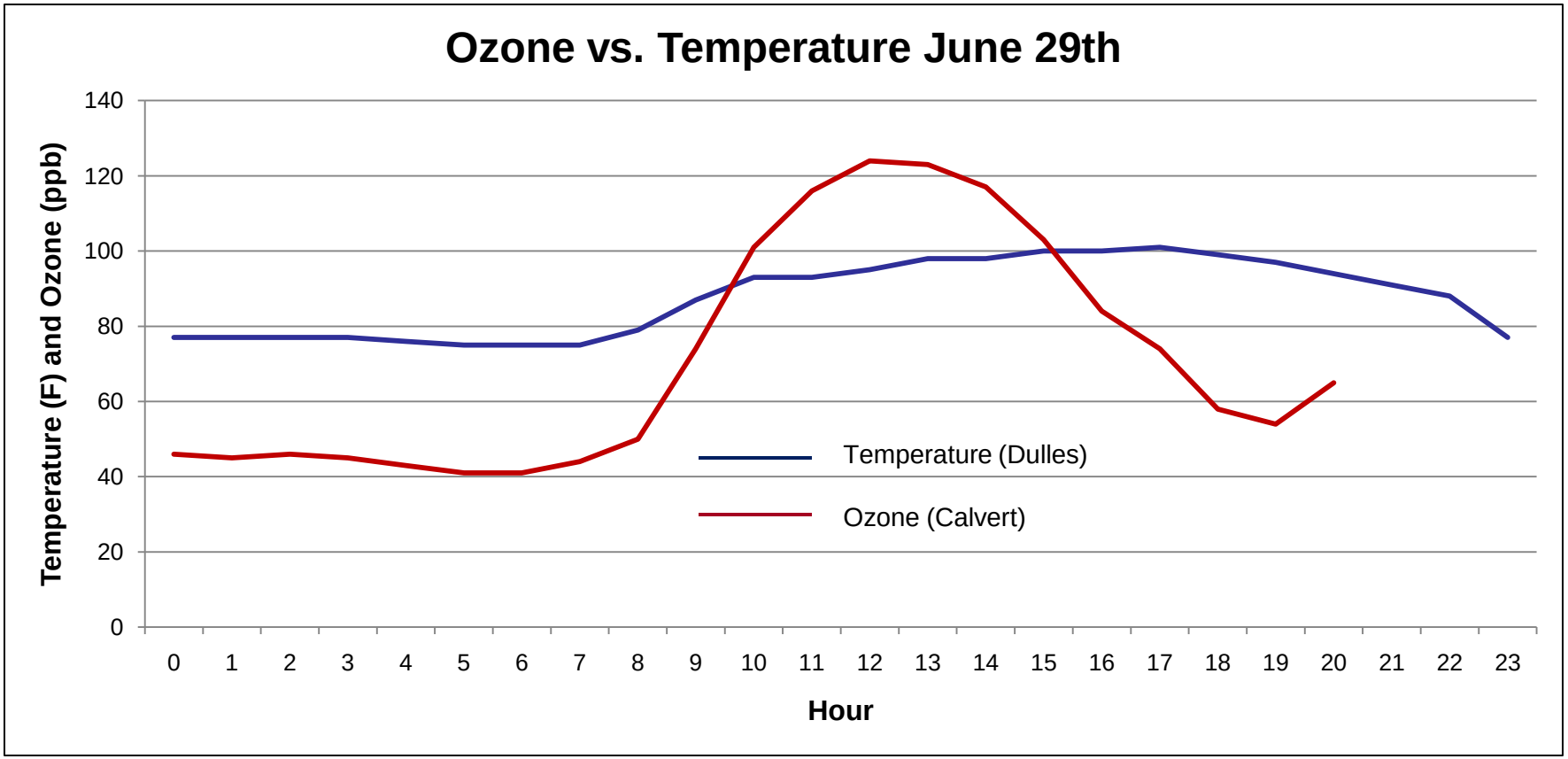
- Warm air
- Limited winds
- Limited or no clouds
- Favorable meteorological conditions for ozone production

❖ Most of the days winds came from Ohio River Valley and beyond bringing ozone and its precursors (VOC & NOx) into our region.

❖ Local production of ozone combined with its transport from outside the region caused significant ozone build-up resulting in exceedances of ozone standard (75 ppb) on those days.

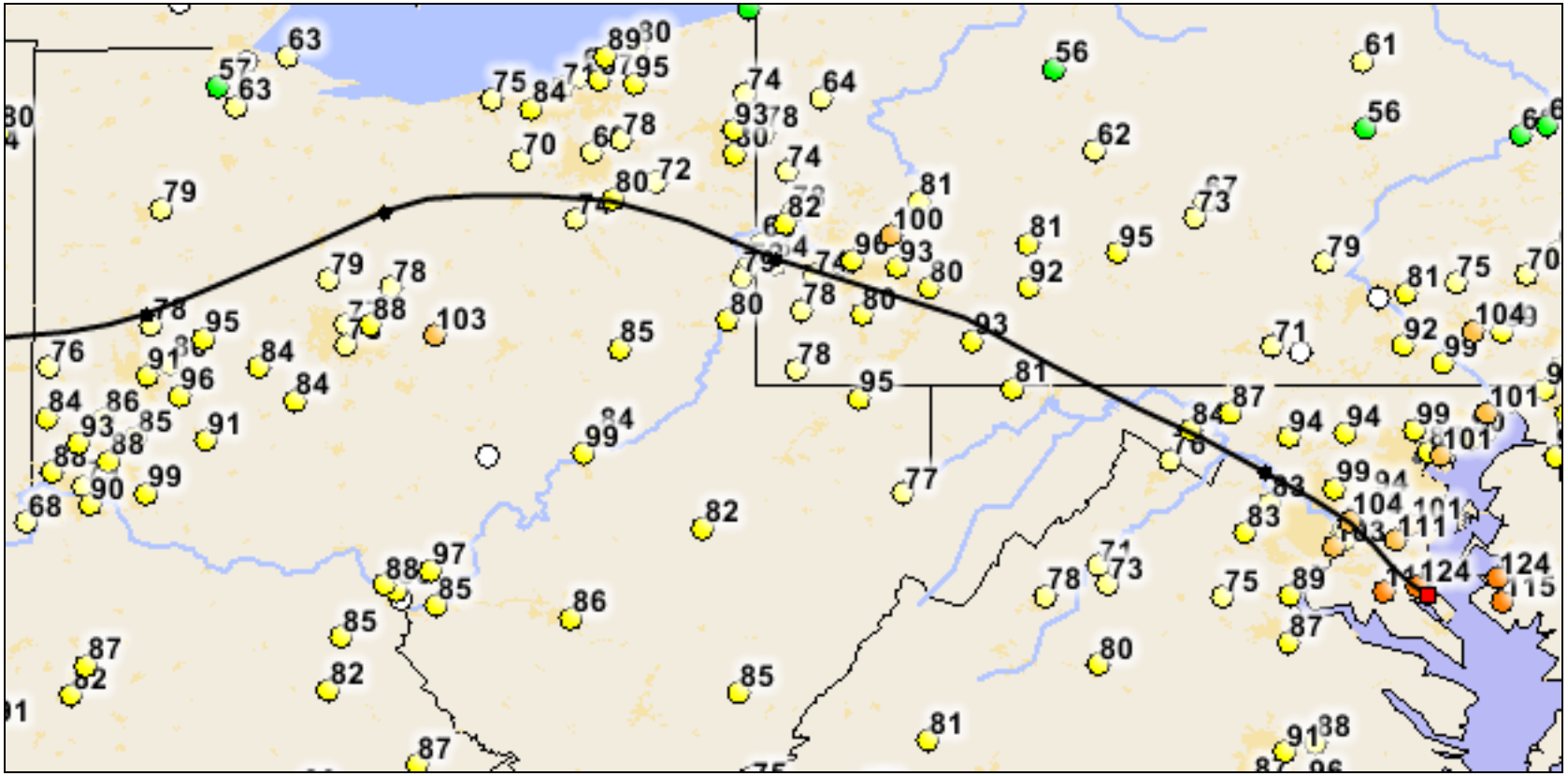
June 29th Code Red

of Monitors in Exceedance: 13
Maximum 8-Hour Ozone: 110 ppb (Calvert)



June 29th Code Red

❖ Winds came into Washington region from several polluted areas including the Ohio River Valley

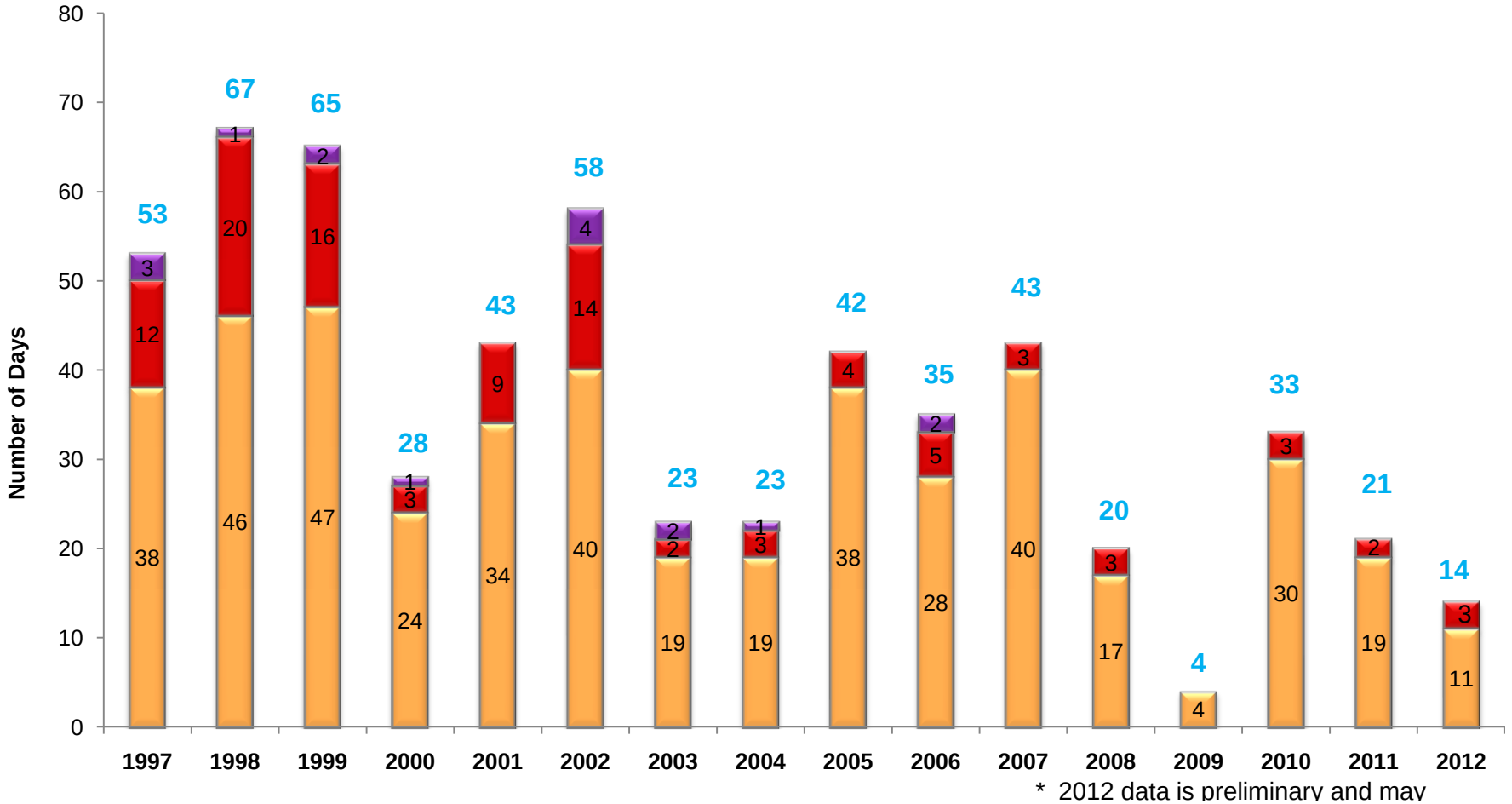


1-Hour Avg Ozone concentrations at 1:00PM
(Avg of 12 PM – 1 PM)

Ozone Exceedance Trend

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

Breakdown of Code Orange, Red, and Purple Days
1997 - 2012



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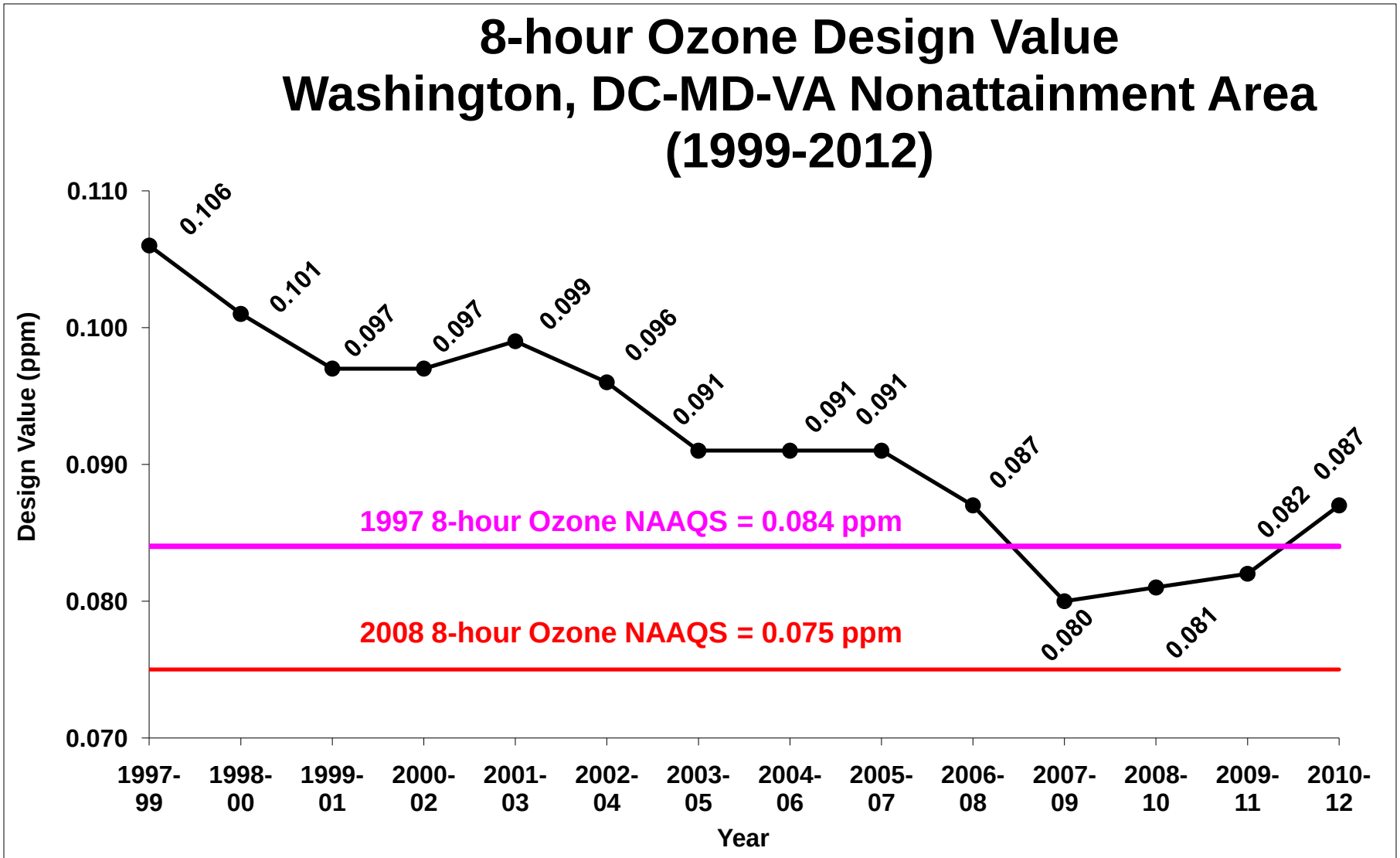
Ozone Design Value Trend



* Design value = 3-year average of 4th highest daily maximum 8-hour average ozone concentrations. 2011 & 2012 data are draft and may change.

Fine Particle Summary

[As of July 08, 2012]

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

Since April 1, 2012, there have been:

22 Code Yellow Days

77 Code Green Days

April

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
12.0	7.2	6.0	9.3	6.0	5.4	5.7
8	9	10	11	12	13	14
6.7	6.3	7.0	6.8	5.7	6.9	10.9
15	16	17	18	19	20	21
18.9	21.3	7.5	8.2	15.0	11.9	10.4
22	23	24	25	26	27	28
3.8	4.5	6.5	7.9	13.0	6.5	7.5
29	30					
10.3	9.5					

May

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
		11.3	17.4	14.5	15.3	15.5
6	7	8	9	10	11	12
9.8	7.0	10.2	13.7	7.7	7.2	9.9
13	14	15	16	17	18	19
15.6	11.1	8.7	15.8	10.7	8.4	7.5
20	21	22	23	24	25	26
7.7	6.5	10.5	14.0	14.4	14.5	11.3
27	28	29	30	31		
8.9	10.6	8.8	10.0	10.3		

June

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
					12.4	8.2
3	4	5	6	7	8	9
10.7	6.8	5.0	6.8	10.2	11.1	12.9
10	11	12	13	14	15	16
20.2	20.4	10.6	9.3	10.0	8.9	8.1
17	18	19	20	21	22	23
11.9	10.2	19.2	28.5	30.2	25.1	12.7
24	25	26	27	28	29	30
14.3	13.0	6.1	13.0	18.7	26.4	16.0

July

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
19.7	13.5	17.4	18.3	20.0	17.4	24.7
8	9	10	11	12	13	14
29.9						
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

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