



Ozone Season Summary

2013

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MWAQC-TAC

July 9, 2013



Ozone Season Summary

Peak 8-Hour Ozone Concentrations (ppb)

April

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
	52	53	52	53	59	53
7	8	9	10	11	12	13
61	62	60	64	68	38	53
14	15	16	17	18	19	20
56	49	54	50	46	38	50
21	22	23	24	25	26	27
54	49	44	56	56	62	70
28	29	30				
71	52	49				

May

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
			59	46	51	50
5	6	7	8	9	10	11
58	35	36	48	46	60	47
12	13	14	15	16	17	18
48	49	55	72	62	71	51
19	20	21	22	23	24	25
37	42	53	60	44	34	44
26	27	28	29	30	31	
50	51	57	61	74	60	

June

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
						57
2	3	4	5	6	7	8
39	48	62	76	49	30	58
9	10	11	12	13	14	15
56	32	52	69	50	50	58
16	17	18	19	20	21	22
48	58	40	47	57	75	53
23	24	25	26	27	28	29
40	65	67	65	44	48	62
30						
42						

July

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
	36	30	28	22	30	37
7	8	9	10	11	12	13
33						
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Since April 1, 2013, there have been:

1 Code Orange Day

23 Code Yellow Days

74 Code Green Days

•2013 data is current at of July 8, 2013. Data is subject to change.



2013 Ozone Exceedances

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
6/5/2013	1	Frederick Co.	76

* 2013 data is current as of July 8, 2013 and is subject to change.

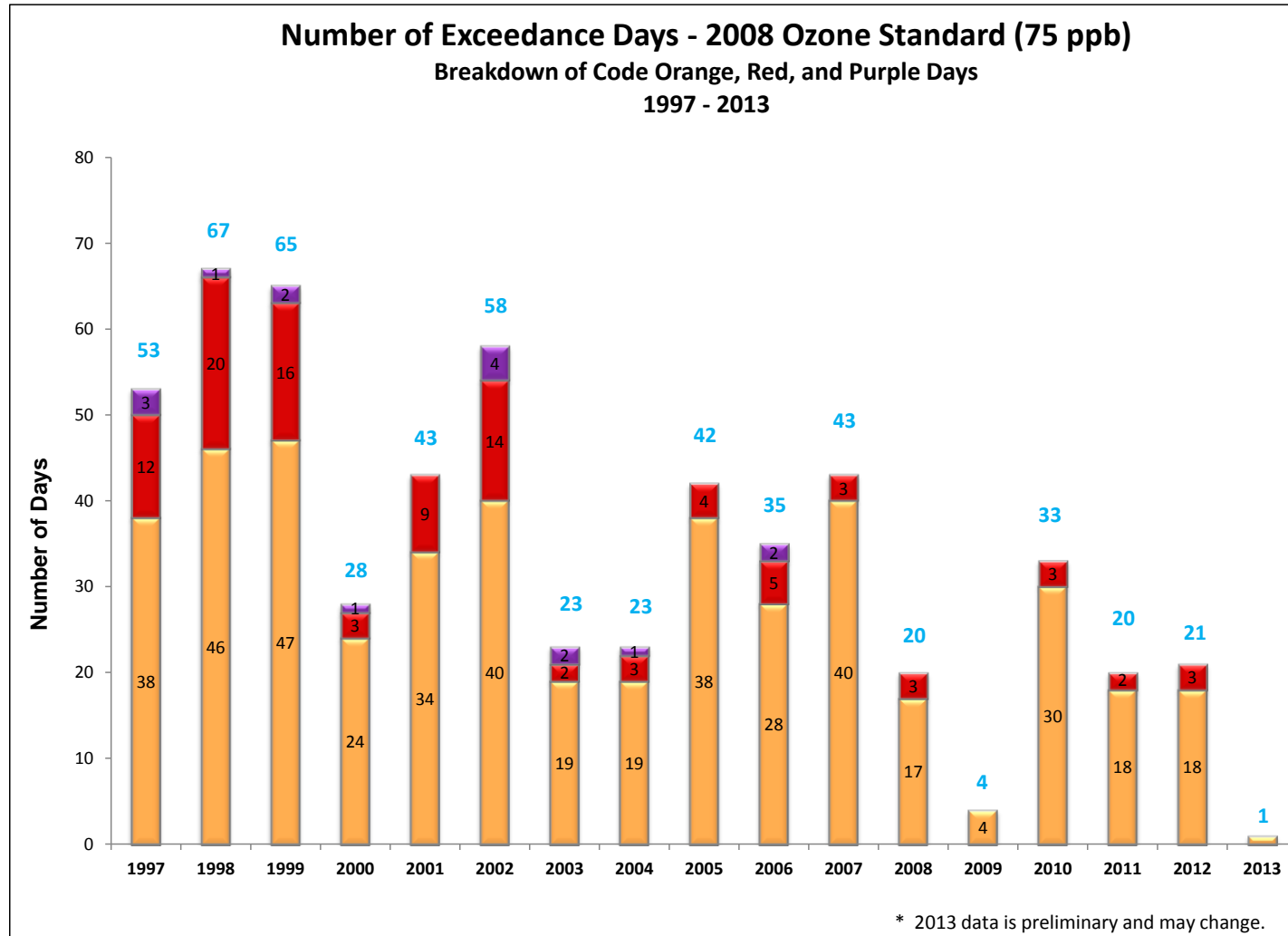


Meteorology – June 5 (Code Orange Day)

- ❖ High pressure in Mid-Atlantic advected warm air into the region.
- ❖ Limited winds and cloud cover helped ozone production.
- ❖ Wind trajectories helped transport emissions from upwind areas with high ozone levels into Frederick.



Ozone Exceedance Trend

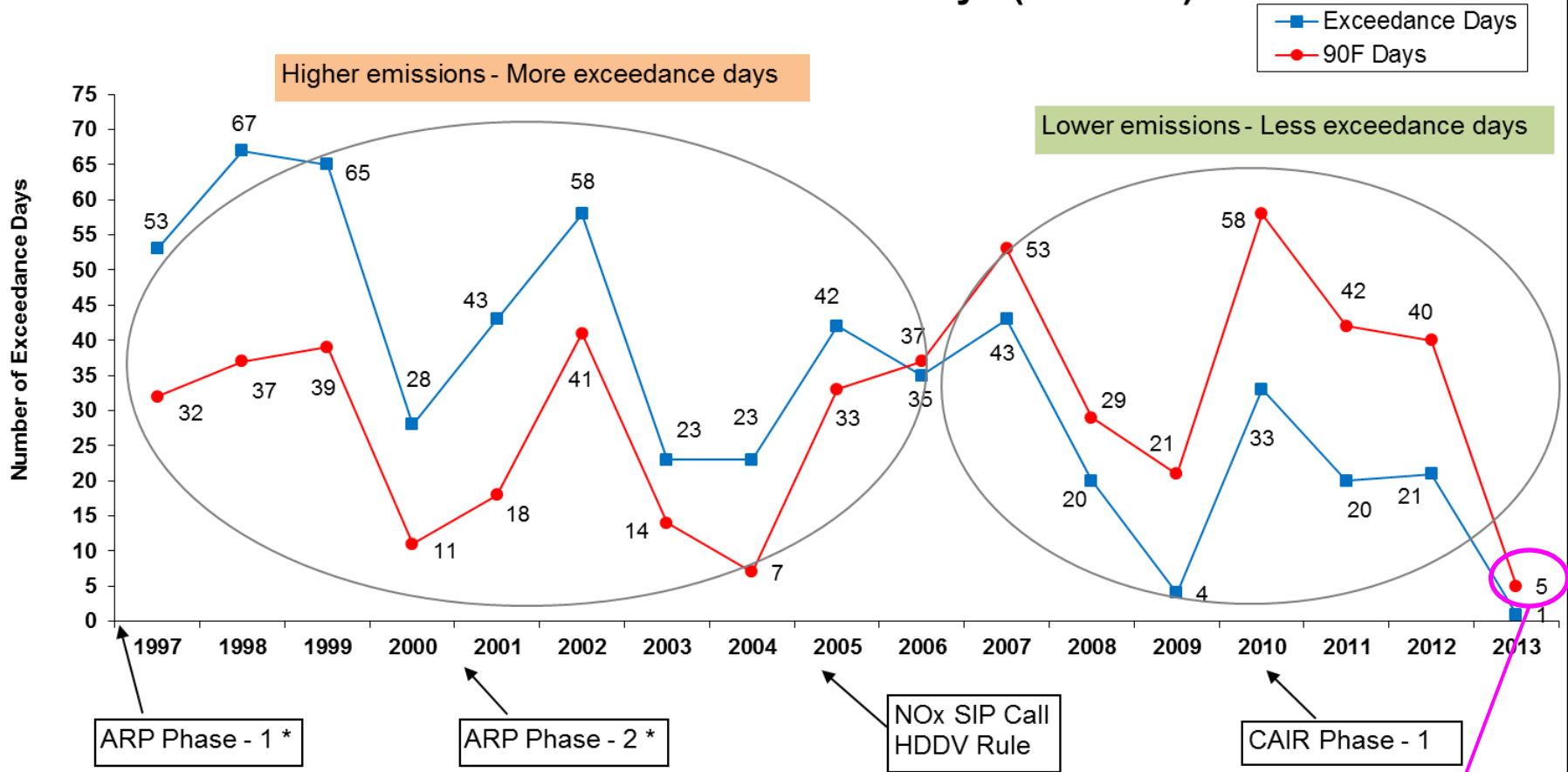


* 2013 analysis is based on draft data as of July 8, 2013 and is subject to change.



Ozone & Temperature Trend

90 Degree Days (DCA) and 8-hour Ozone Exceedance Days (2008 std)



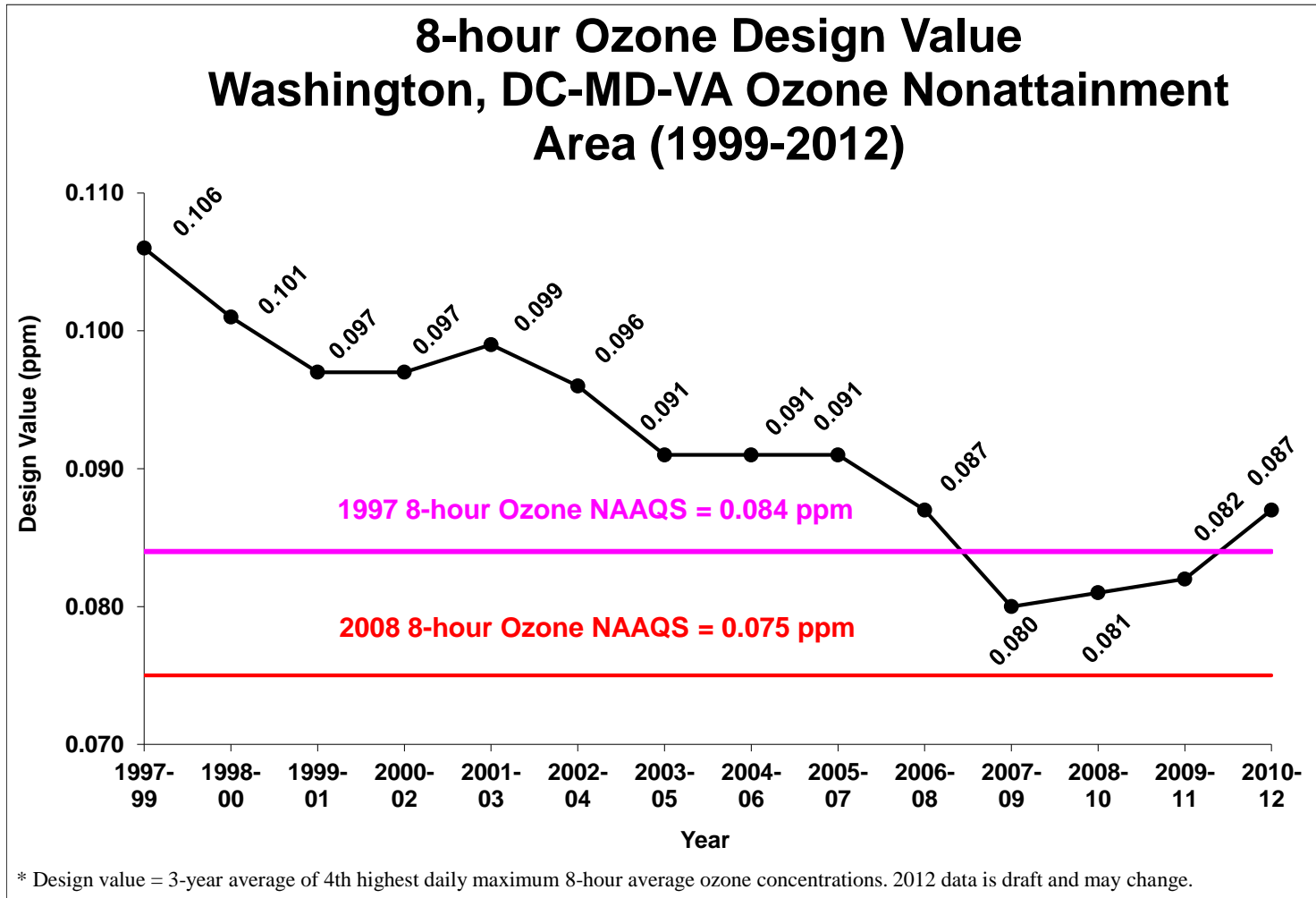
* ARP = Acid Rain Program

- Phase 1 : 1996
- Phase 2 : 2000

*Data period: April 1–July 8, subject to change.



Ozone Design Value Trend





Fine Particle Summary

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

April

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
	15.1	7.3	9.4	7.9	14.0	8.8
7	8	9	10	11	12	13
10.1	14.8	14.0	19.1	14.9	13.4	11.9
14	15	16	17	18	19	20
11.6	12.4	12.1	14.8	14.8	9.0	7.3
21	22	23	24	25	26	27
7.9	6.7	13.0	13.6	9.0	11.6	14.3
28	29	30				
11.4	7.1	5.3				

May

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
			7.5	5.5	7.3	5.6
5	6	7	8	9	10	11
8.8	10.1	6.2	9.5	10.3	15.5	13.2
12	13	14	15	16	17	18
7.8	5.4	7.7	14.1	17.3	11.3	7.5
19	20	21	22	23	24	25
8.7	10.8	12.8	20.4	9.0	4.3	5.0
26	27	28	29	30	31	
5.7	6.8	16.1	17.6	16.9	14.8	

June

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
						11.7
2	3	4	5	6	7	8
8.6	9.0	6.9	9.7	7.4	6.0	13.0
9	10	11	12	13	14	15
15.2	7.1	8.8	16.8	10.9	5.3	13.2
16	17	18	19	20	21	22
14.4	12.0	13.6	8.7	8.7	7.6	6.7
23	24	25	26	27	28	29
7.5	10.1	9.4	9.1	9.8	7.5	7.8
30						

July

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
	4.6	5.3	6.7	8.5	6.5	5.4
7	8	9	10	11	12	13
4.7						
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Since April 1, 2013, there have been:

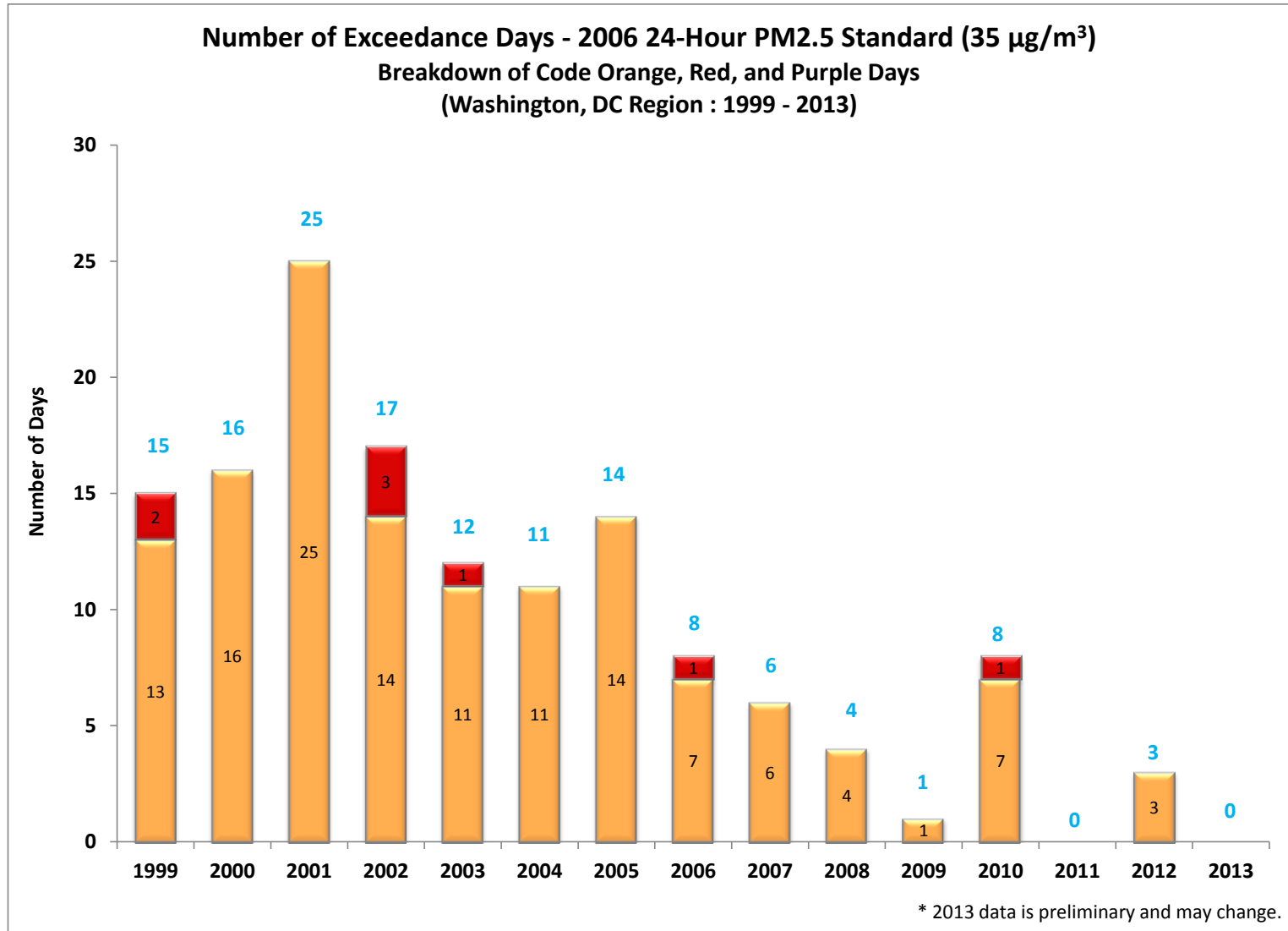
27 Code Yellow Days

71 Code Green Days

* 2013 data is current as of July 8, 2013 and is subject to change.



PM2.5 Exceedance Trend

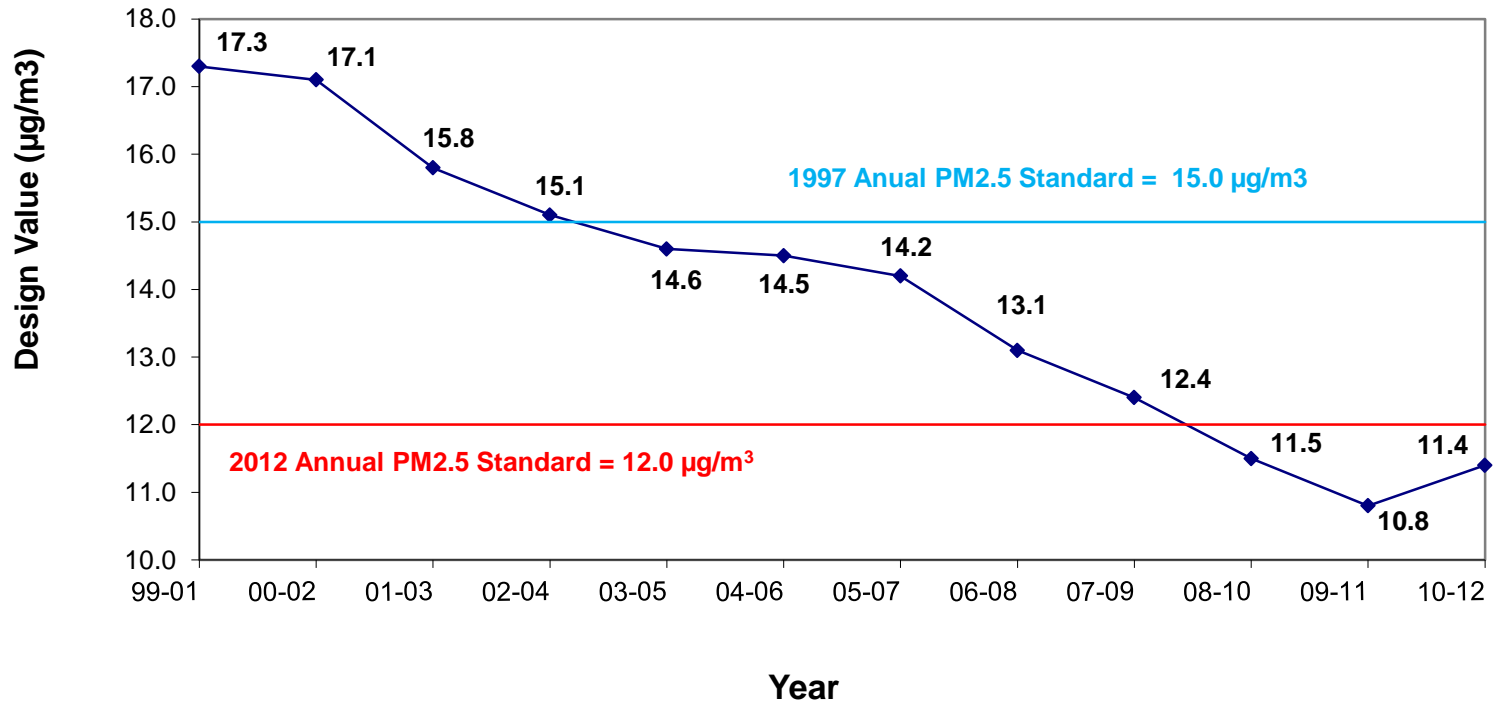


* 2013 data is current as of July 8, 2013 and is subject to change.



Annual PM_{2.5} Design Value Trend

**Annual PM_{2.5} Design Value
Washington, DC-MD-VA Nonattainment Area (1999-2012)**



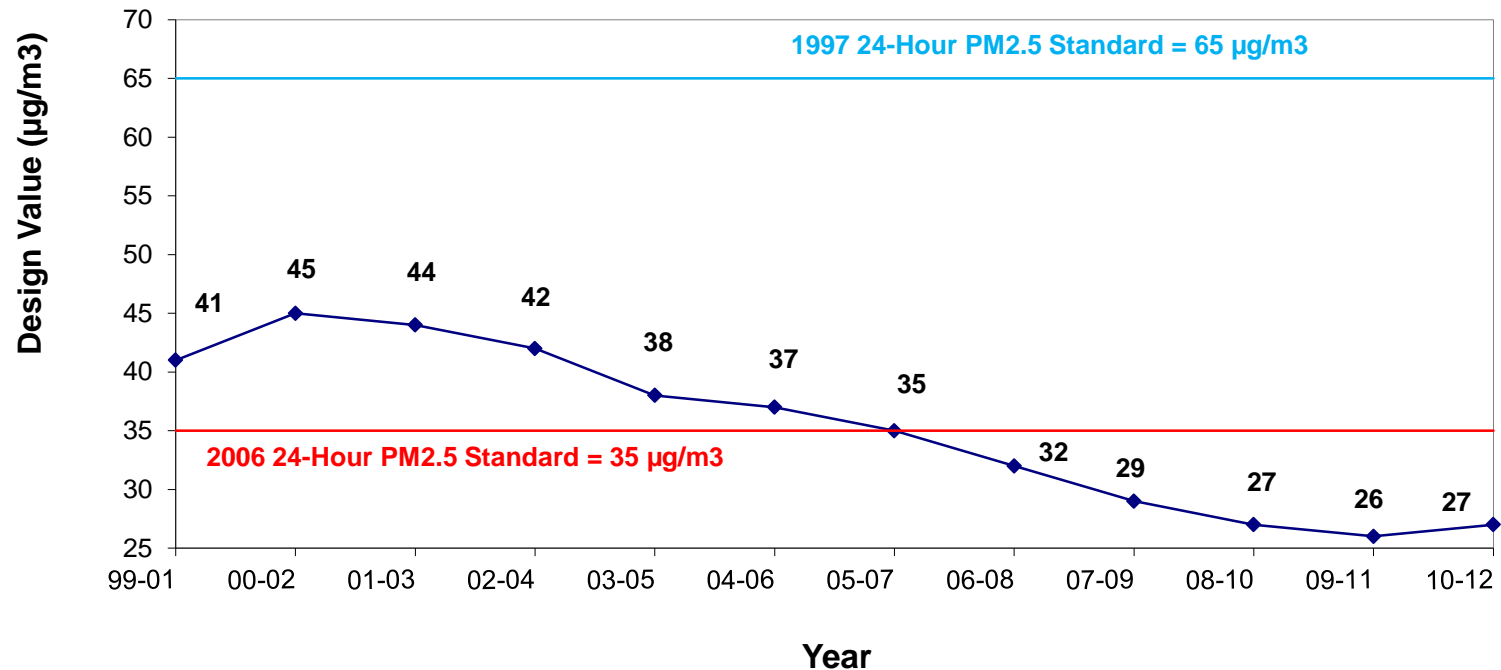
* Design value = 3-year avg of annual mean PM_{2.5} concentrations.

* 2012 data is preliminary and may change.



24-Hour PM_{2.5} Design Value Trend

24-Hour PM_{2.5} Design Value Washington, DC-MD-VA Nonattainment Area (1999-2012)



* Design value = 3-year average of 98th percentile of PM_{2.5} concentrations.

* 2012 data is preliminary and may change.