



2009 Ozone Season Summary and Air Quality Trends

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MWAQC Meeting, COG

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Ozone Season Summary (2009)

Daily Peak 8-hour Ozone Concentration (PPB) Washington Area-2009

Peak 8-Hour Ozone Concentrations (ppb)

Data based on the 8-hour standard set at 75 ppb.

4 Code Orange Days

38 Code Yellow Days

96 Code Green Days

MAY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
					40	40
3	4	5	6	7	8	9
42	41	38	33	36	53	48
10	11	12	13	14	15	16
47	41	55	62	45	56	37
17	18	19	20	21	22	23
44	50	57	66	73	72	51
24	25	26	27	28	29	30
41	46	41	27	36	46	58
31						
58						

JUNE

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
	56	70	72	43	43	48
7	8	9	10	11	12	13
60	85	57	63	45	56	61
14	15	16	17	18	19	20
58	60	47	36	49	67	45
21	22	23	24	25	26	27
43	44	59	59	76	78	56
28	29	30				
39	56	55				

JULY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
			59	46	41	47
5	6	7	8	9	10	11
41	68	59	53	52	64	52
12	13	14	15	16	17	18
54	66	57	72	65	49	49
19	20	21	22	23	24	25
55	56	67	60	43	61	61
26	27	28	29	30	31	
53	64	61	43	59	36	

AUGUST

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
						46
2	3	4	5	6	7	8
46	69	59	63	45	53	64
9	10	11	12	13	14	15
57	58	67	65	66	68	69
16	17	18	19	20	21	22
70	72	67	43	54	41	39
23	24	25	26	27	28	29
57	59	70	68	80	45	37
30	31					
53	32					

SEPTEMBER

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
		45	57	64	70	66
6	7	8	9	10	11	12
59	30	39	45	35	27	24
13	14	15	16	17	18	19
45	52	55				
20	21	22	23	24	25	26
27	28	29	30			

* Analysis is based on draft data until September 15, 2009. Data is subject to change.



2009 Ozone Exceedances

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
6/8/09	5	McMillan	85
6/25/09	1	Calvert Co	76
6/26/09	2	McMillan	78
8/27/09	2	Franconia	80

* Analysis is based on draft data until September 15, 2009. Data is subject to change.

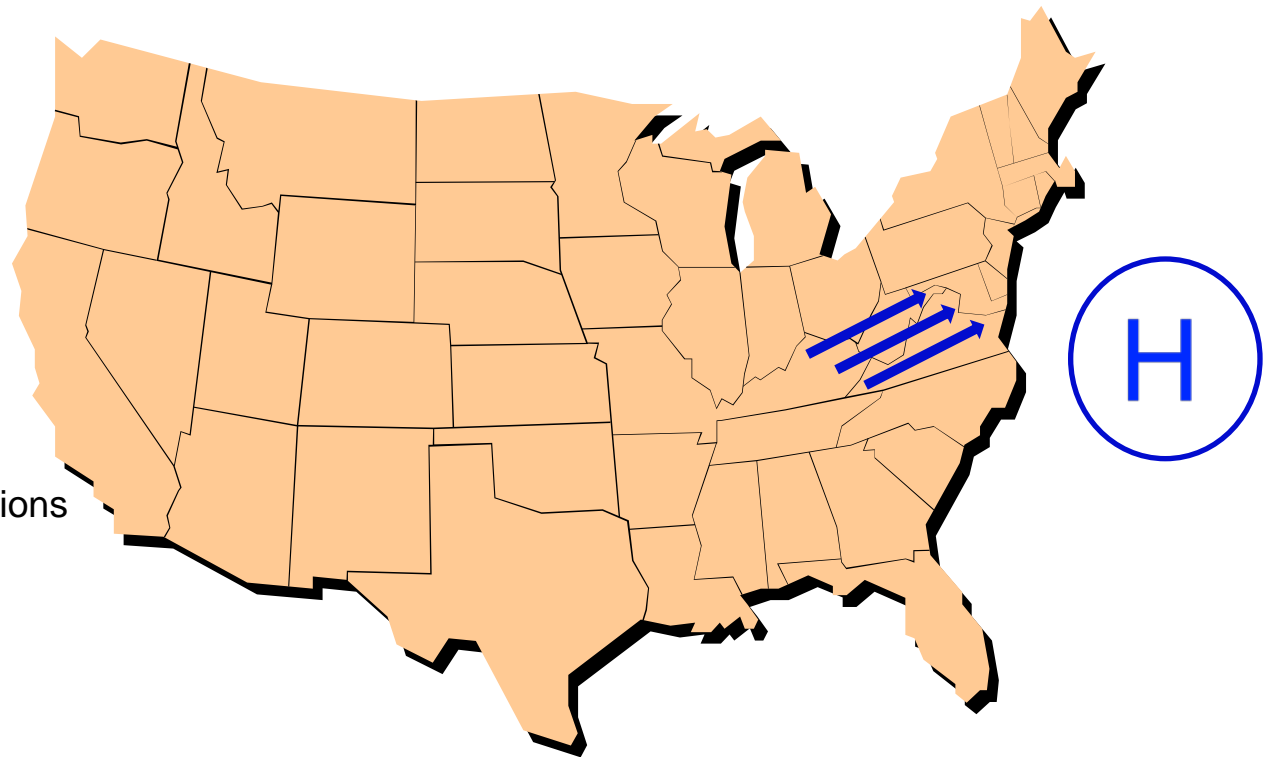


Why So Few Code Orange Days?

Meteorology Played a Big Role in this Year's Ozone Season.

Typical weather pattern for high ozone.

- Warm Temperatures
- Lots of Sun
- West Winds
- No Rain
- Elevated Background Concentrations



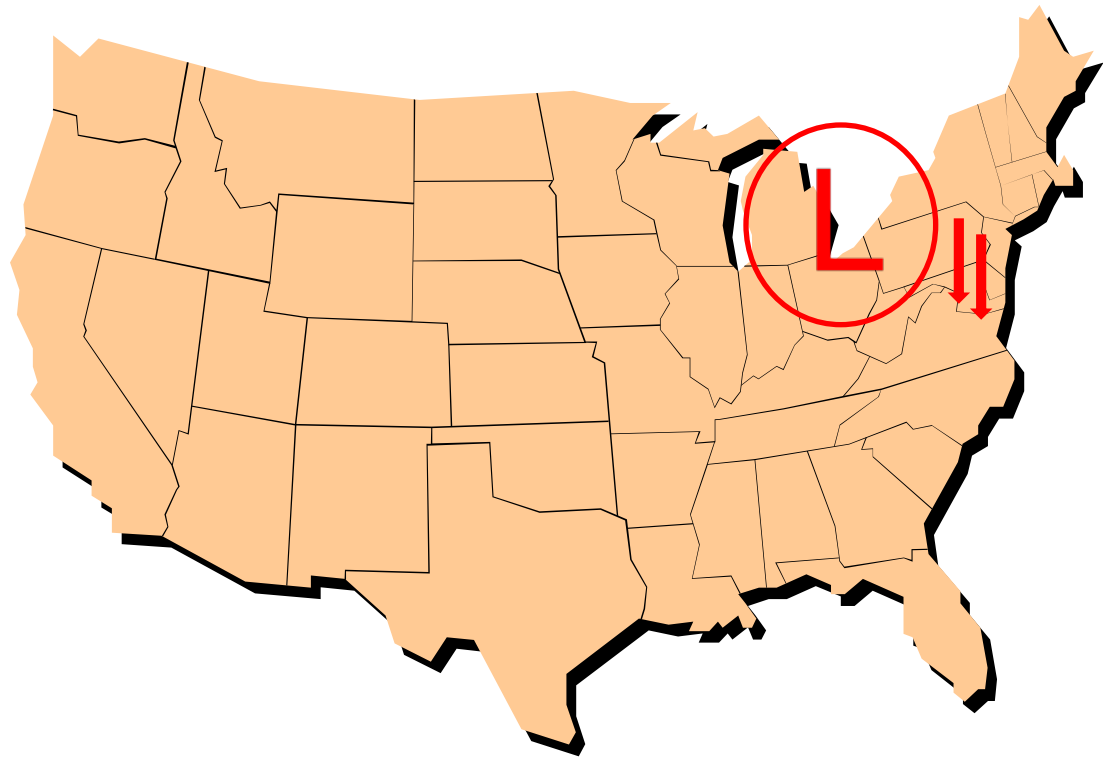


Why So Few Code Orange Days?

Meteorology Played a Big Role in this Year's Ozone Season.

Weather pattern for the summer of '09.

- Cooler Temperatures
- Too Many Clouds
- Northerly or Southerly Winds
- Showers and Storms
- Low Background Concentrations





Fine Particle Summary (2009)

Daily 24-Hour Particle Concentration (ug/m3) Washington Area-2009

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

Data based on the 24-hour standard set at 35.5 ug/m3.

37 Code Yellow Days

101 Code Green Days

MAY

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

JUNE

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

JULY

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

AUGUST

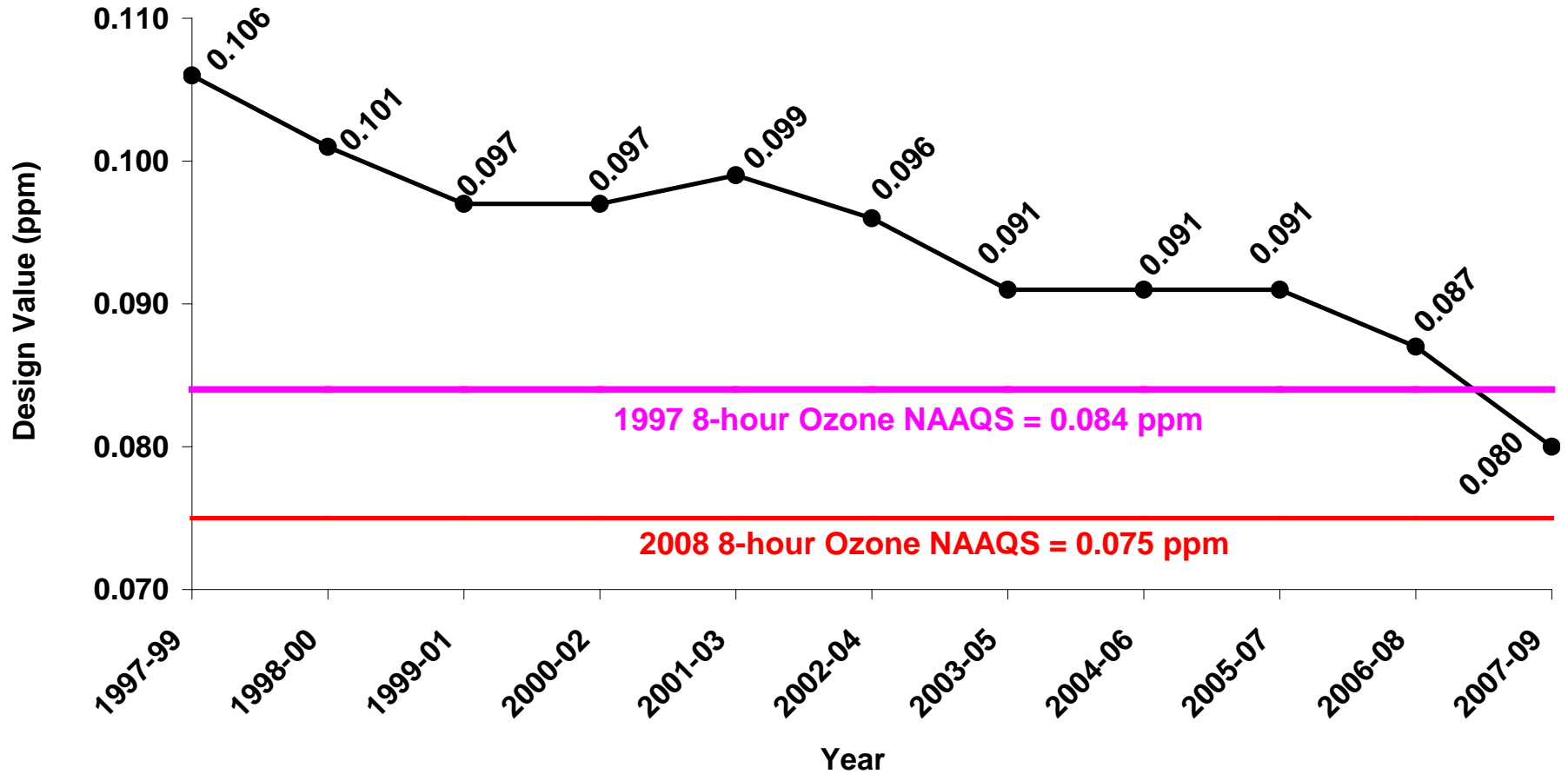
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
						12
2	3	4	5	6	7	8
9	18	23	19	18	8	20
9	10	11	12	13	14	15
24	20	16	18	11	14	13
16	17	18	19	20	21	22
19	20	18	11	9	7	10
23	24	25	26	27	28	29
13	8	14	23	28	18	14
30	31					
12	5					

SEPTEMBER

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

* Analysis is based on draft data until September 15, 2009. Data is subject to change.

8-hour Ozone Design Value Washington, D.C. Region, 1999-2009

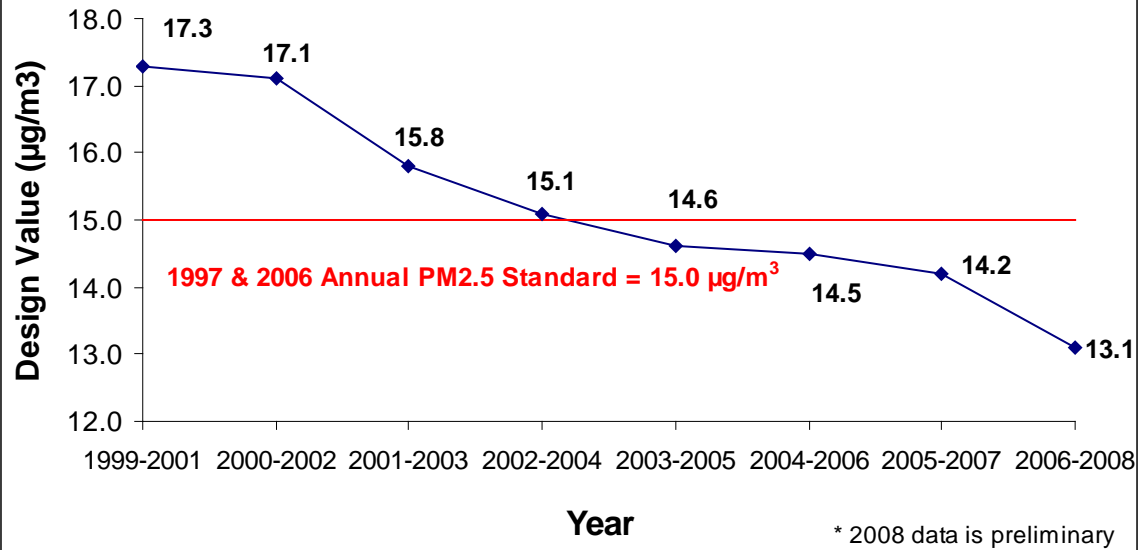


* Design value = 3-year average of 4th highest daily maximum 8-hour average ozone concentrations

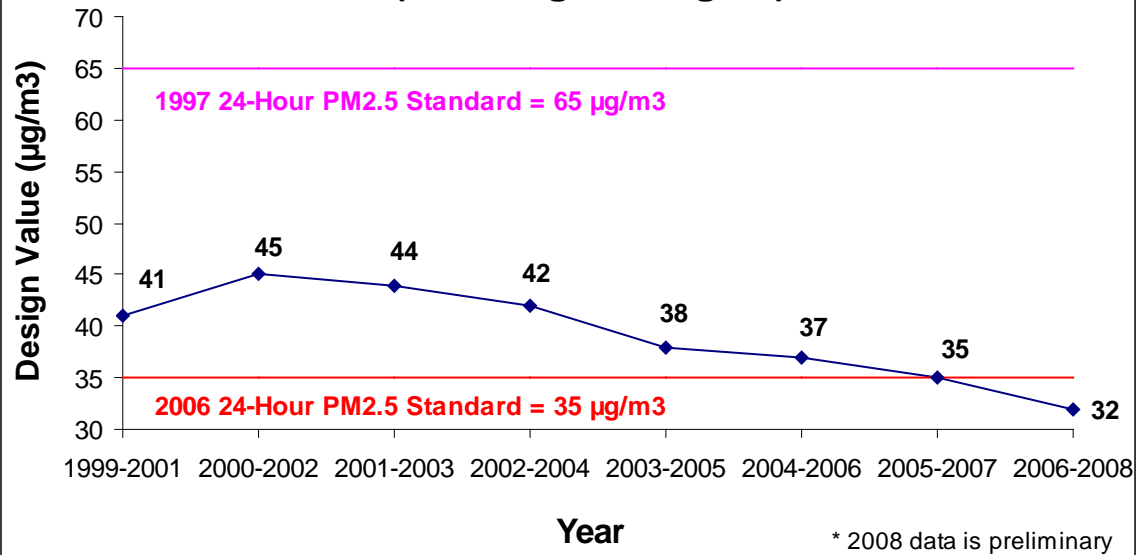
* 2008 & 2009 data are preliminary

* Analysis is based on draft data until September 15, 2009. Data is subject to change.

Annual PM2.5 Design Value (Washington Region)



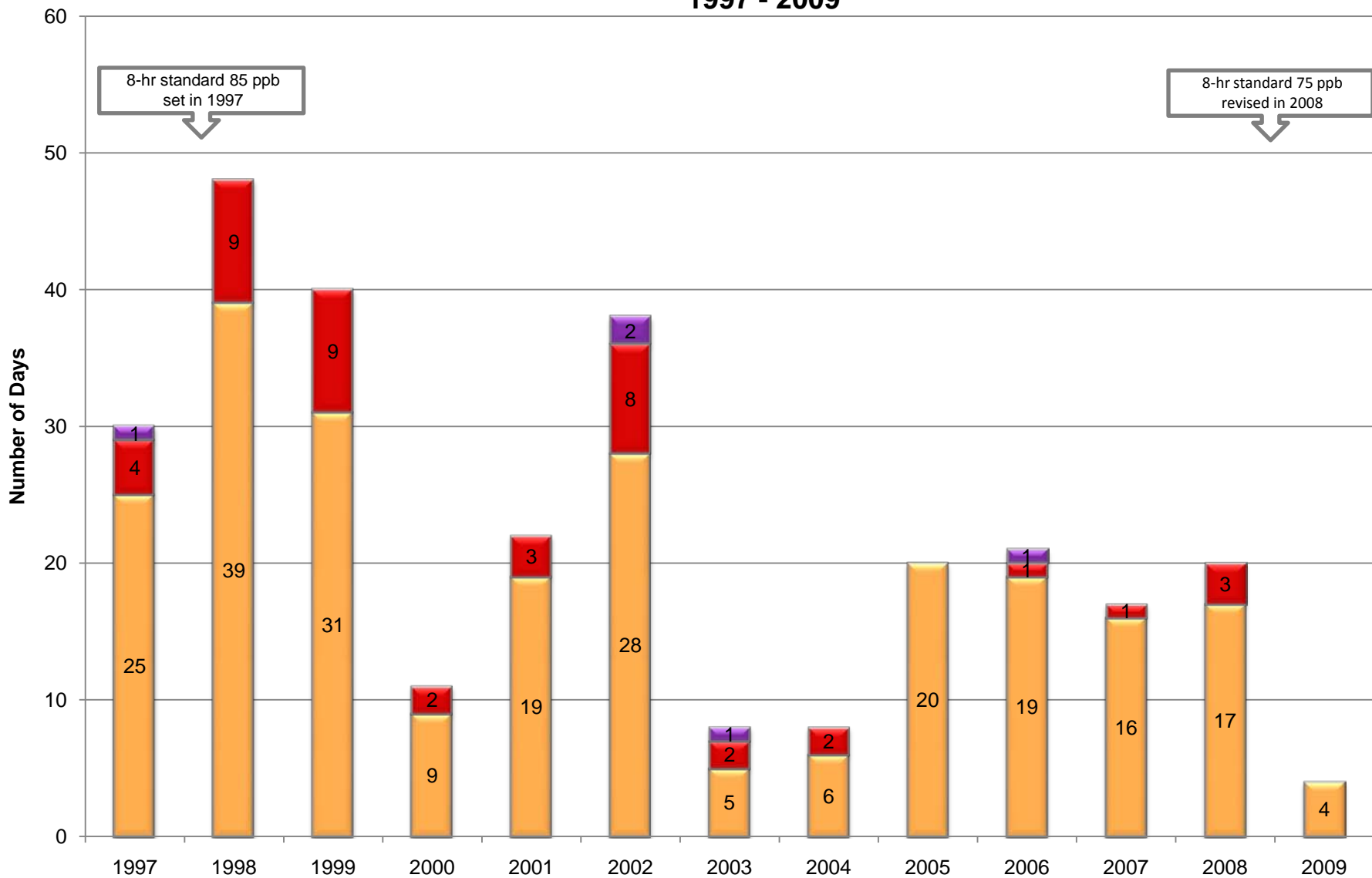
24-Hour PM2.5 Design Value (Washington Region)



Number of Ozone Exceedance Days

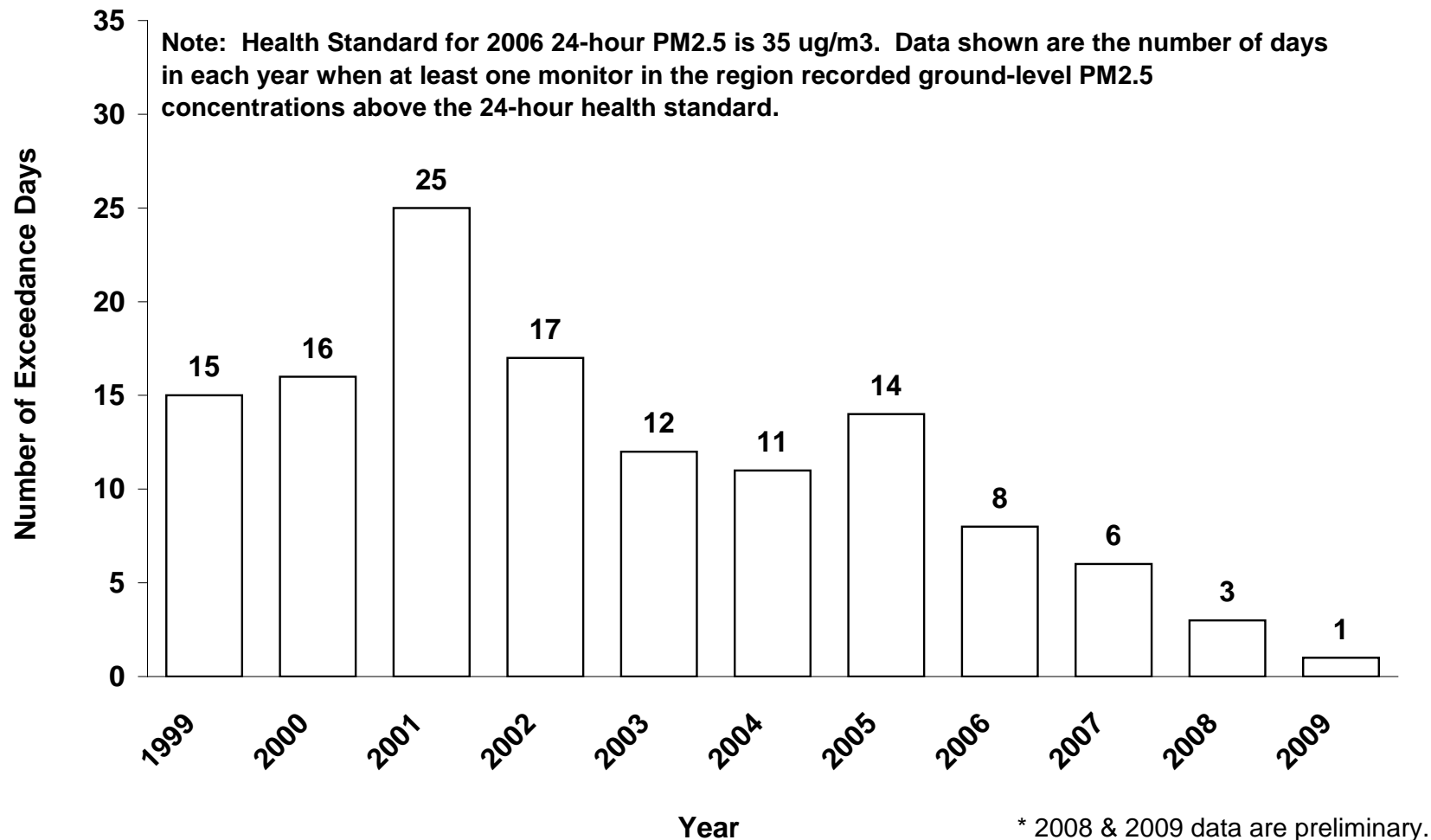
Breakdown of Code Orange, Red, and Purple Days

1997 - 2009

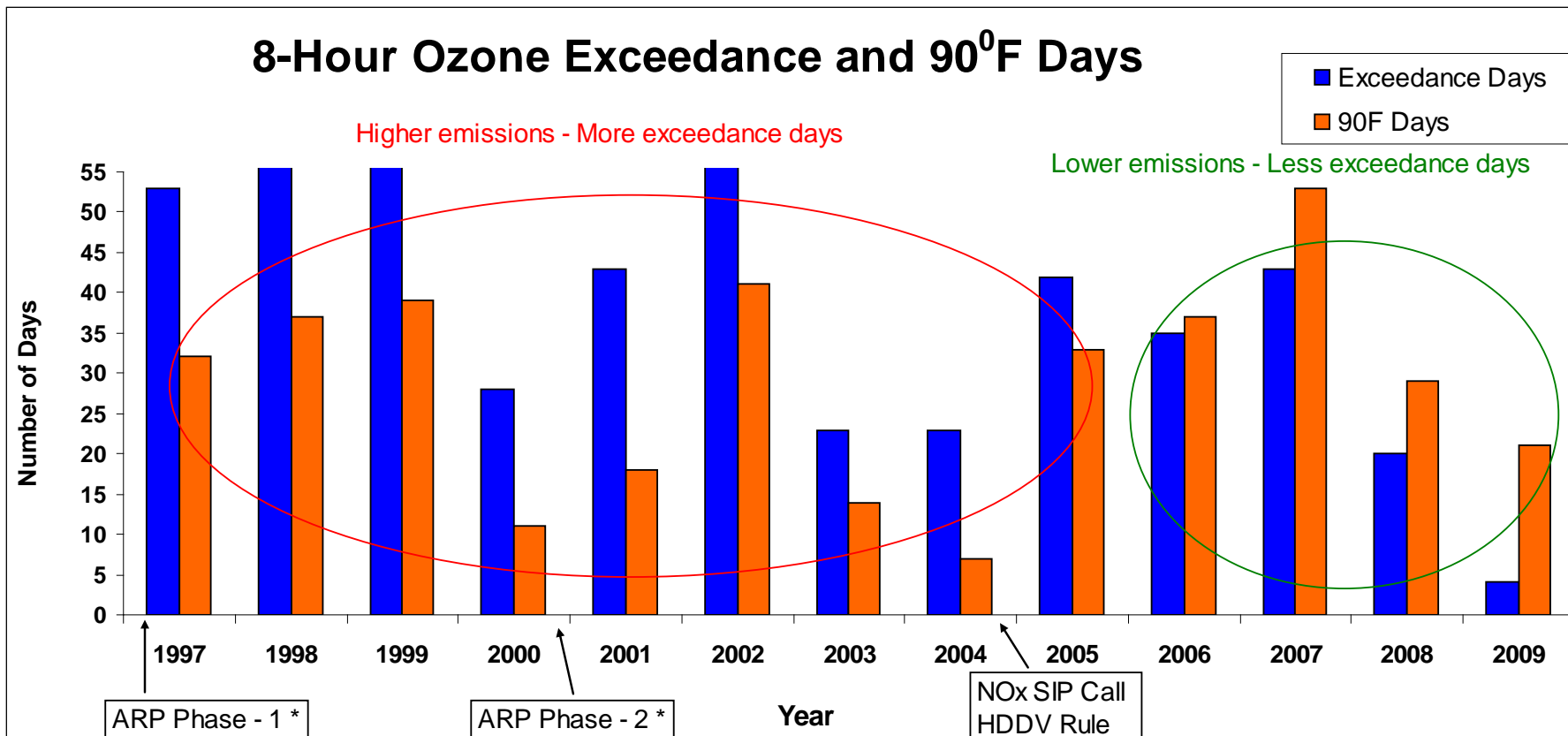


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Exceedances of 24-Hour PM_{2.5} Standard Washington, D.C. Region, 1999-2009



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*** ARP = Acid Rain Program**

- Phase 1 : 1996
- Phase 2 : 2000

* 2009 data is valid as of September 15, 2009 and subject to change.