OZONE SEASON SUMMARY 2015

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MWAQC-Technical Advisory Committee
May 10, 2016

Agenda Item 2

Metropolitan Washington
Council of Governments

Peak 8-Hour Average Ozone Levels (ppb)

APRIL 2016

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
				1	2	3
				48	46	45
4	5	6	7	8	9	10
51	45	52	42	46	41	47
11	12	13	14	15	16	17
55	49	48	57	57	65	64
18	19	20	21	22	23	24
73	75	55	61	51	46	54
25	26	27	28	29	30	
59	62	35	38	36	36	

MAY 2016

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
						1
						37
2	3	4	5	6	7	8
38	40	29	27			
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

2 Code Orange Days, 9 Code Yellow Days, 24 Code Green Days

Analysis is based on draft data as of May 6, 2015. Data is subject to change

2016 Ozone Exceedances

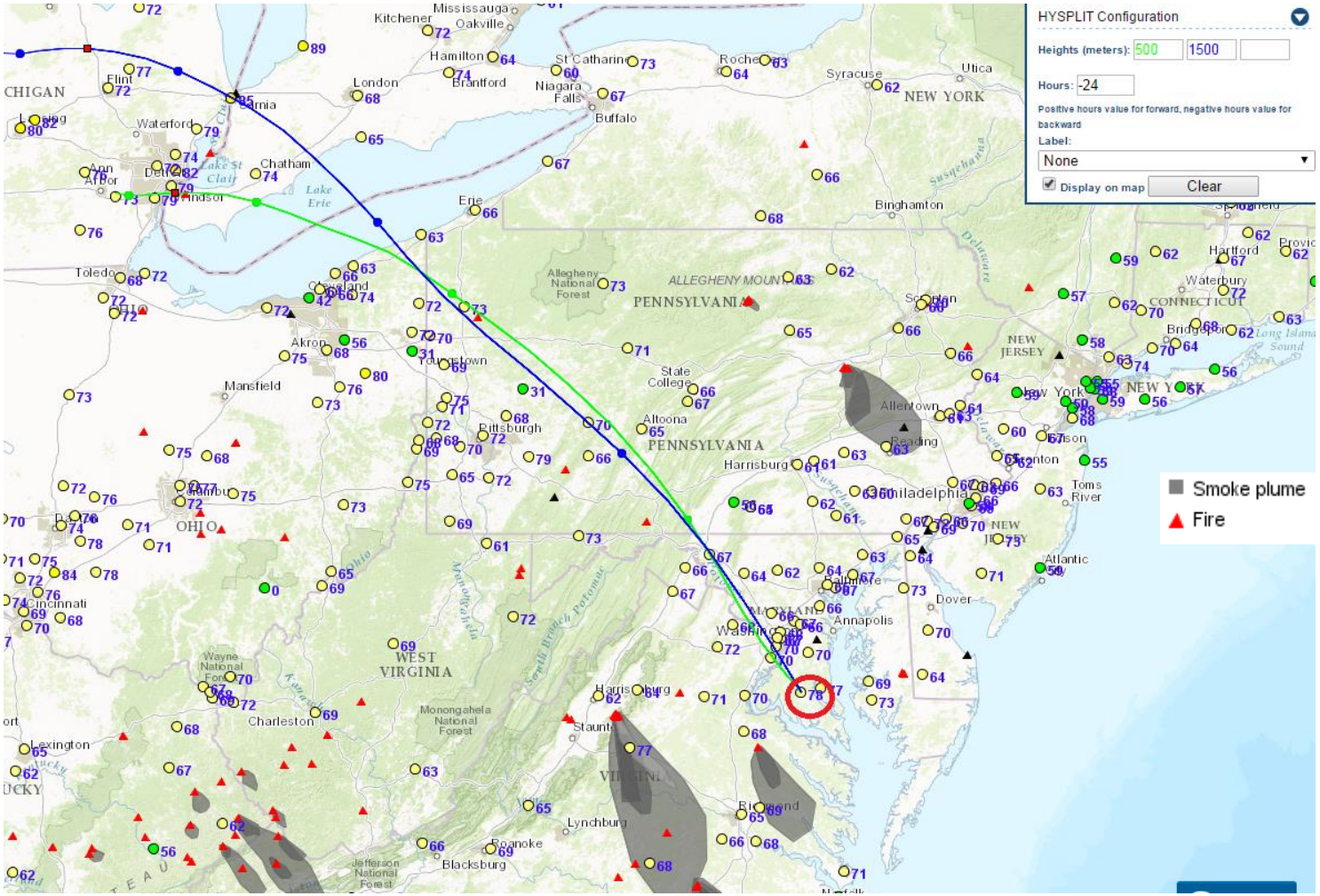
Date	Monitors Exceeding	Highest Monitor	8-Hr Max (ppb)
4/18	1	Southern Maryland	73
4/19	6	Southern Maryland	75

Analysis is based on draft data as of May 6, 2016. Data is subject to change.

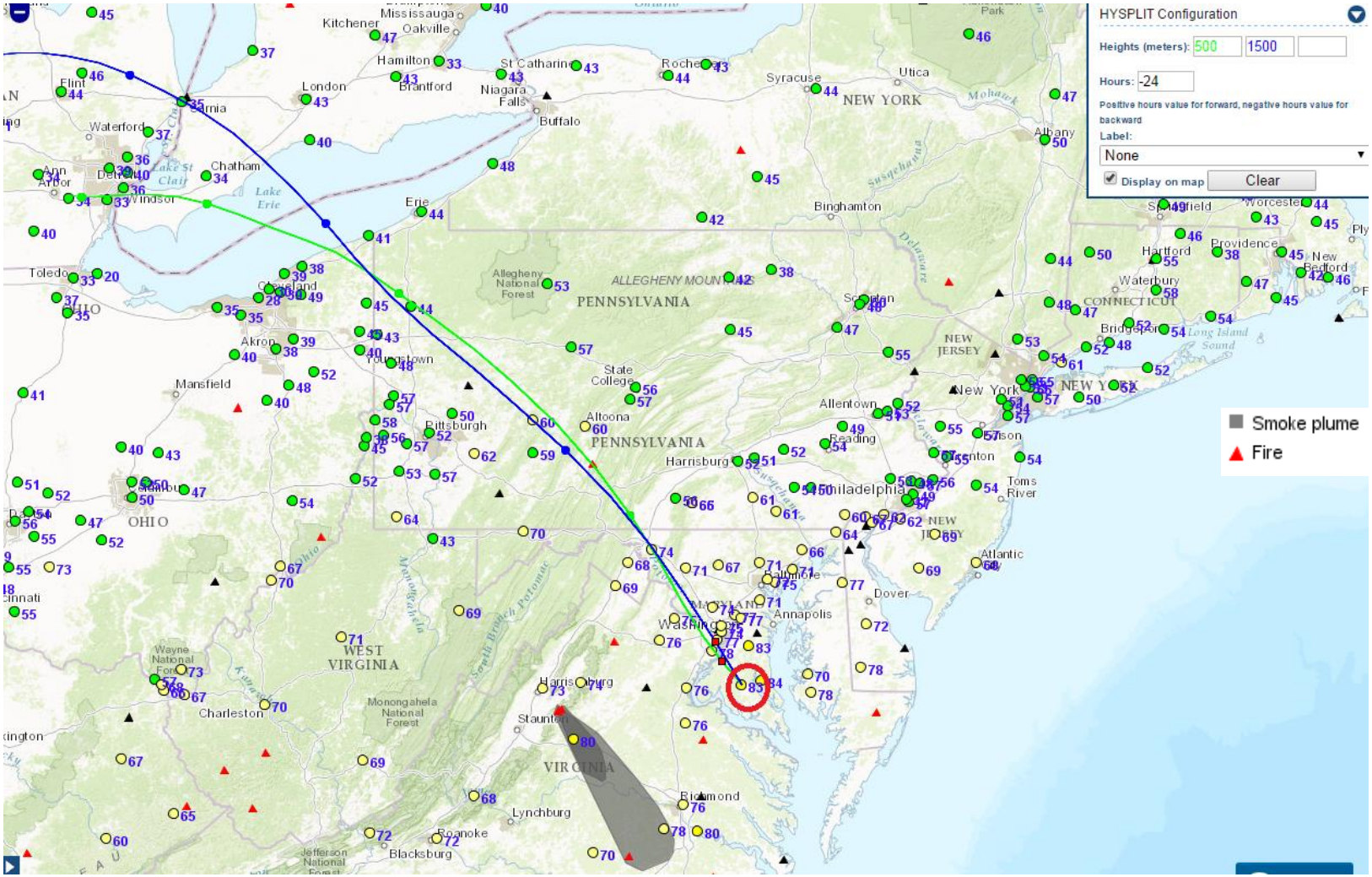
Meteorology on Exceedance Days

- April 18/19 (Local & Transported Emissions)
  - High Temperatures: 83°F/82°F, Clear skies
  - Light westerly winds brought ozone from Ohio River Valley
  - Ozone build up on previous days

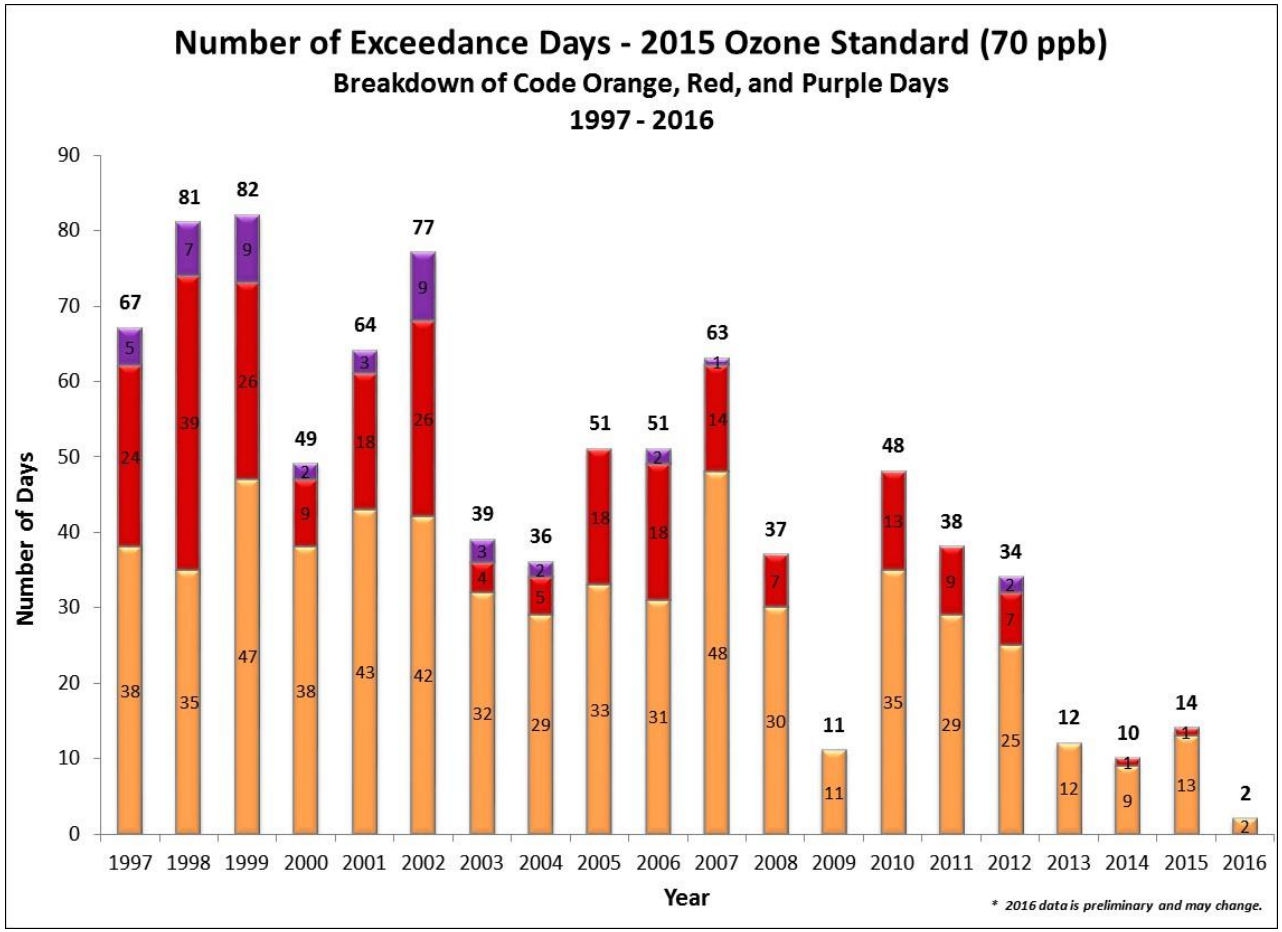
Wind Trajectories (April 18)



Wind Trajectories (April 19)



Ozone Exceedance Trend



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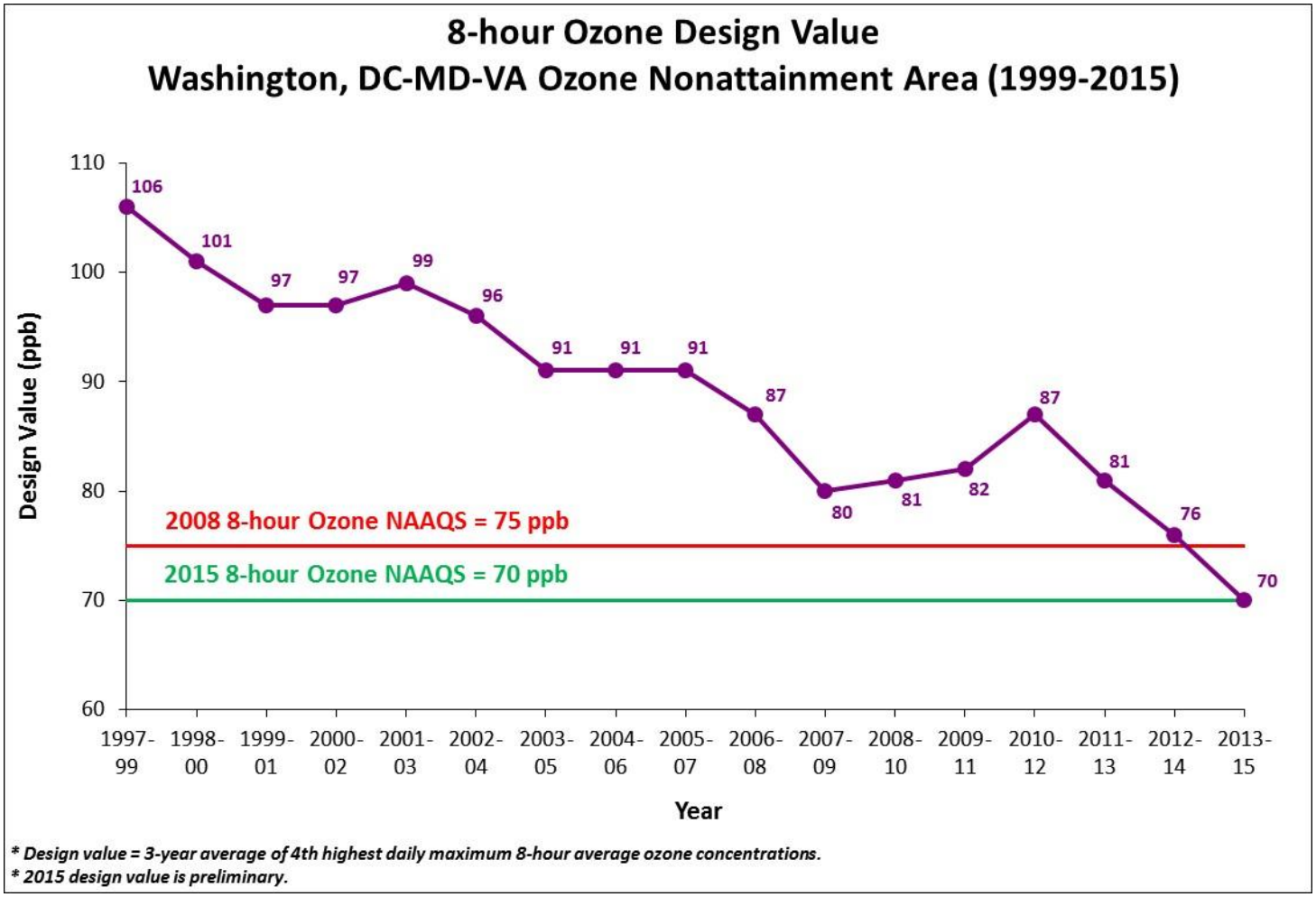
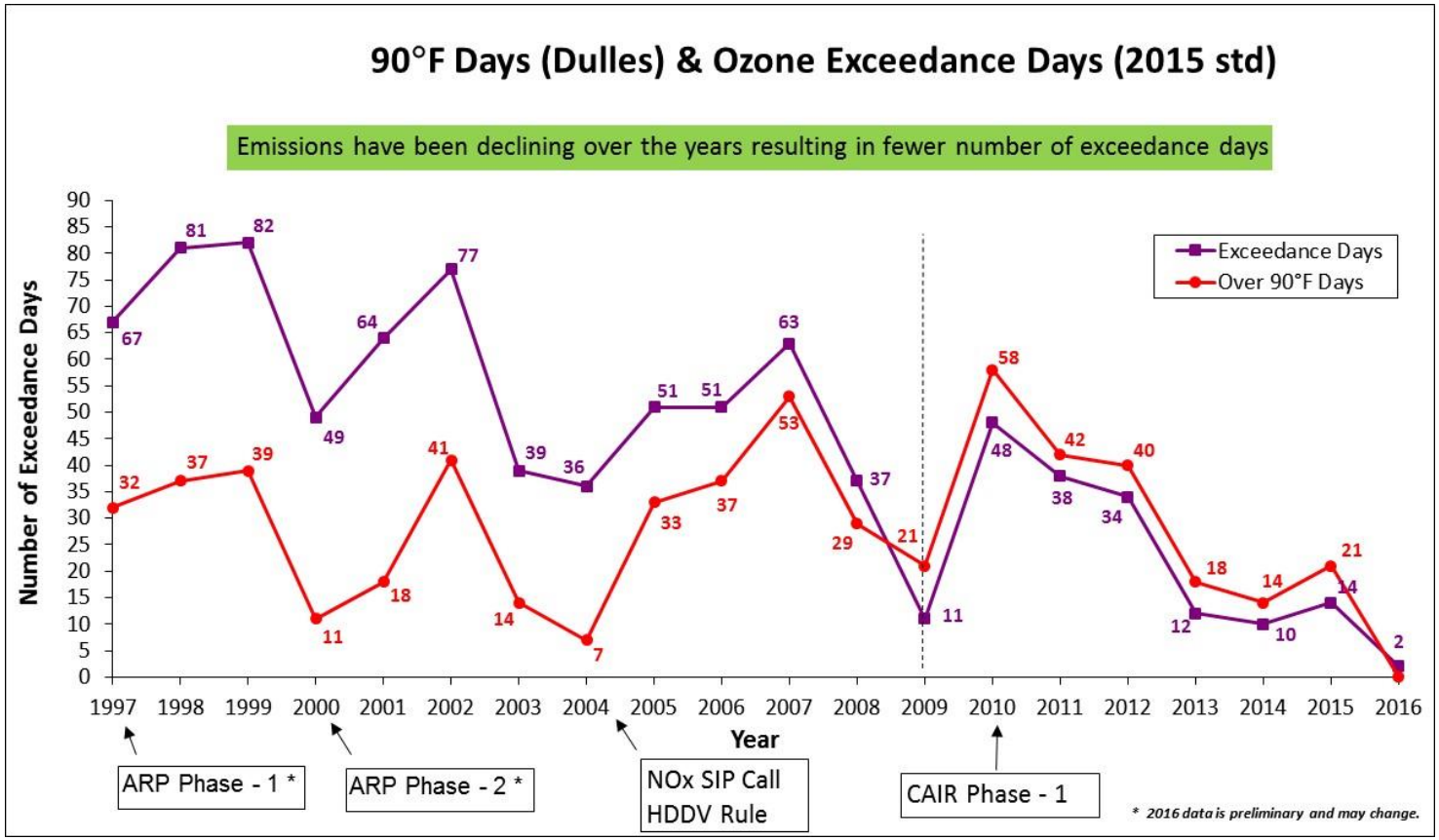
Ozone Design Value Trend



** Design value = 3-year average of 4th highest daily maximum 8-hour average ozone concentrations.*
** 2015 design value is preliminary.*

Ozone & Temperature Trend



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Why Fewer Exceedance Days Now ?

Emission Control Programs

Federal	State	Local
Acid Rain Program (1996/2000)	Vehicle Inspection and Maintenance Programs	Renewable Energy Programs Regional Wind Power Purchase Program Clean Energy Rewards Program Renewable Portfolio Standards
Tier 2 (LD Vehicle) Rule (2004)	MD Healthy Air Act (2009/2012)	Energy Efficiency Programs LED Traffic Signal Retrofit Program Building Energy Efficiency Programs
HD Diesel Vehicle Rule (2004/2007)	VA CSAPR Rule	VRE Idling Reduction
NOx SIP Call (2004)		Low VOC Paint
Clean Air Interstate Rule/CSAPR (2009/2015)	Ozone Transport Commission Rules	Gas Can Replacement

24-Hour Average PM2.5 Levels (µg/m³)

APRIL 2016

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
				1	2	3
				7.9	7.0	4.7
4	5	6	7	8	9	10
5.9	7.7	10.6	6.9	4.7	6.0	7.1
11	12	13	14	15	16	17
7.6	9.3	8.0	13.7	9.1	13.6	9.7
18	19	20	21	22	23	24
10.1	11.4	5.4	12.5	13.0	9.0	4.3
25	26	27	28	29	30	
10.3	10.2	12.7	13.6	11.2	13.3	

MAY 2016

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
						1
						5.1
2	3	4	5	6	7	8
6.8	12.8	10.7	7.9			
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

8 Code Yellow Days, 27 Code Green Days

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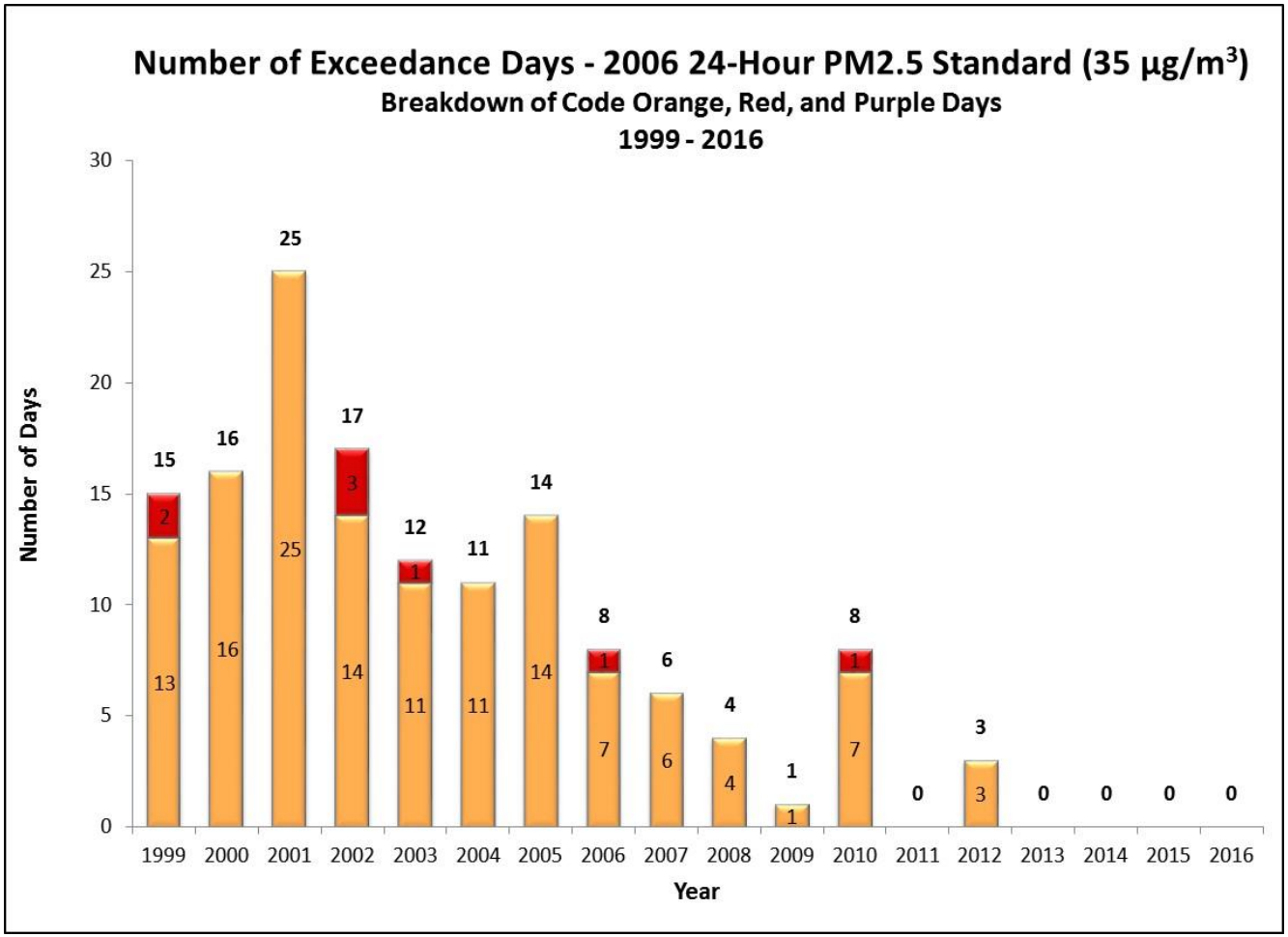
PM2.5 Exceedance Trend



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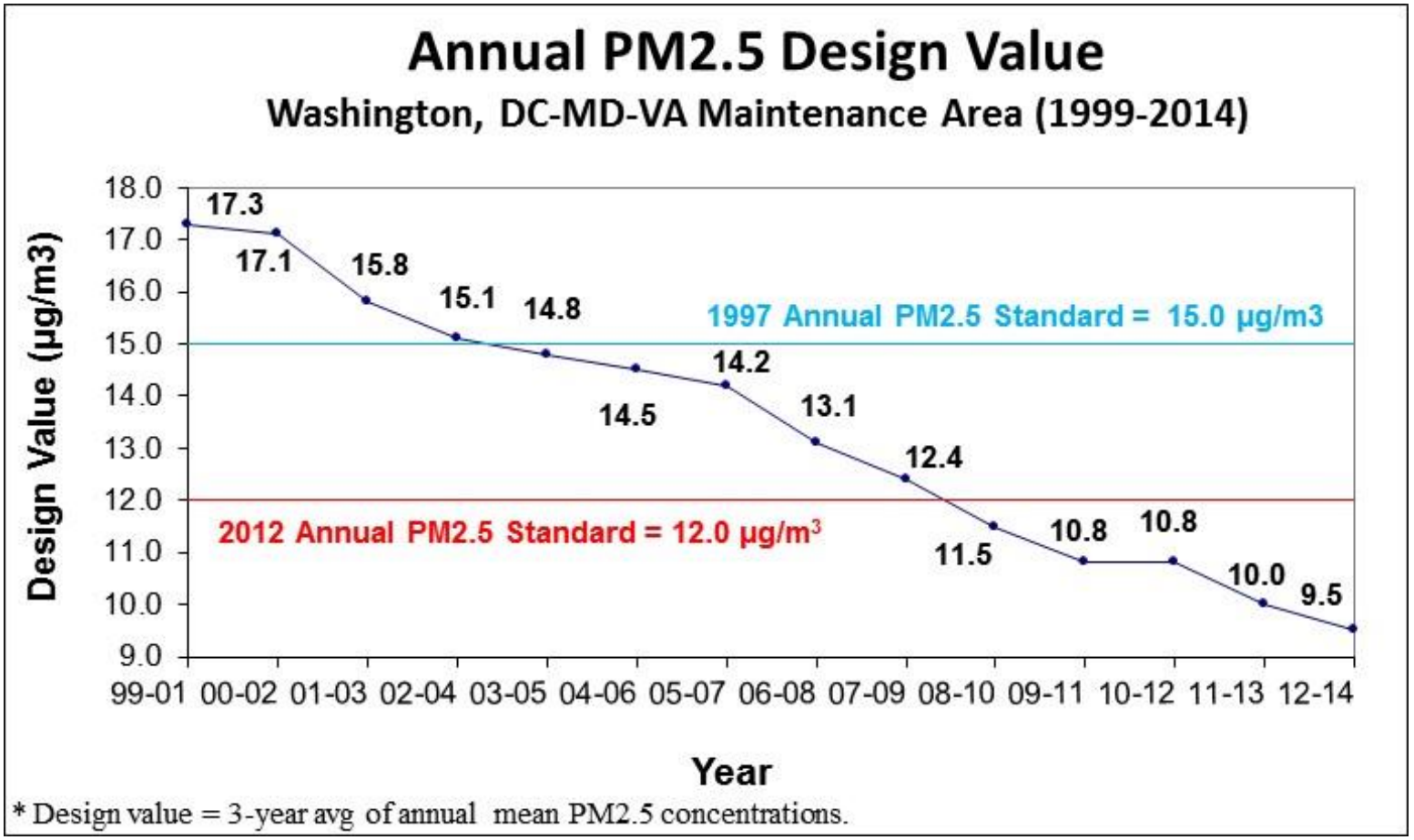
Annual PM2.5 Design Value Trend



24-Hour PM2.5 Design Value Trend