

OZONE SEASON SUMMARY 2018

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MWAQC-Technical Advisory Committee
May 8, 2018

Peak 8-Hour Average Ozone Levels (ppb)

April 2018							May 2018						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	31	29	30	01	02	03	04	05
									70	73	64	68	53
01	02	03	04	05	06	07	06	07	08	09	10	11	12
48	45	40	48	51	61	51	46						
08	09	10	11	12	13	14	13	14	15	16	17	18	19
52	50	54	56	59	70	57							
15	16	17	18	19	20	21	20	21	22	23	24	25	26
44	36	44	52	50	56	56							
22	23	24	25	26	27	28	27	28	29	30	31	01	02
61	59	53	48	57	53	61							
29	30	01	02	03	04	05	03	04	05	06	07	08	09
46	60												

1 Code Orange Day, 15 Code Yellow Days, 20 Code Green Days

Analysis is based on draft data as of May 6, 2018. Data is subject to change

2018 Ozone Exceedances

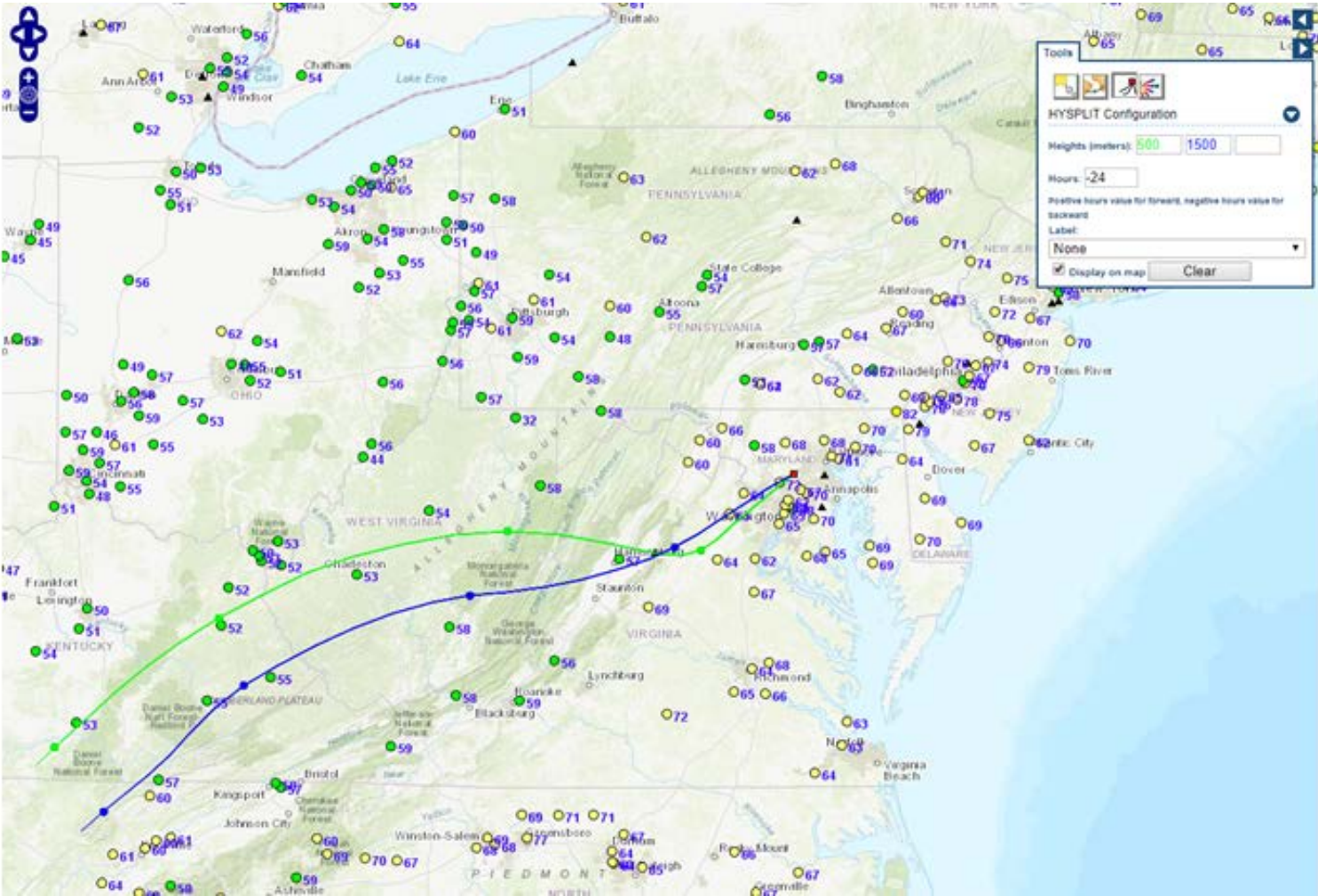
Date	Monitors Exceeding	Highest Monitor	8-Hr Max (ppb)
5/2	1	Beltsville	73

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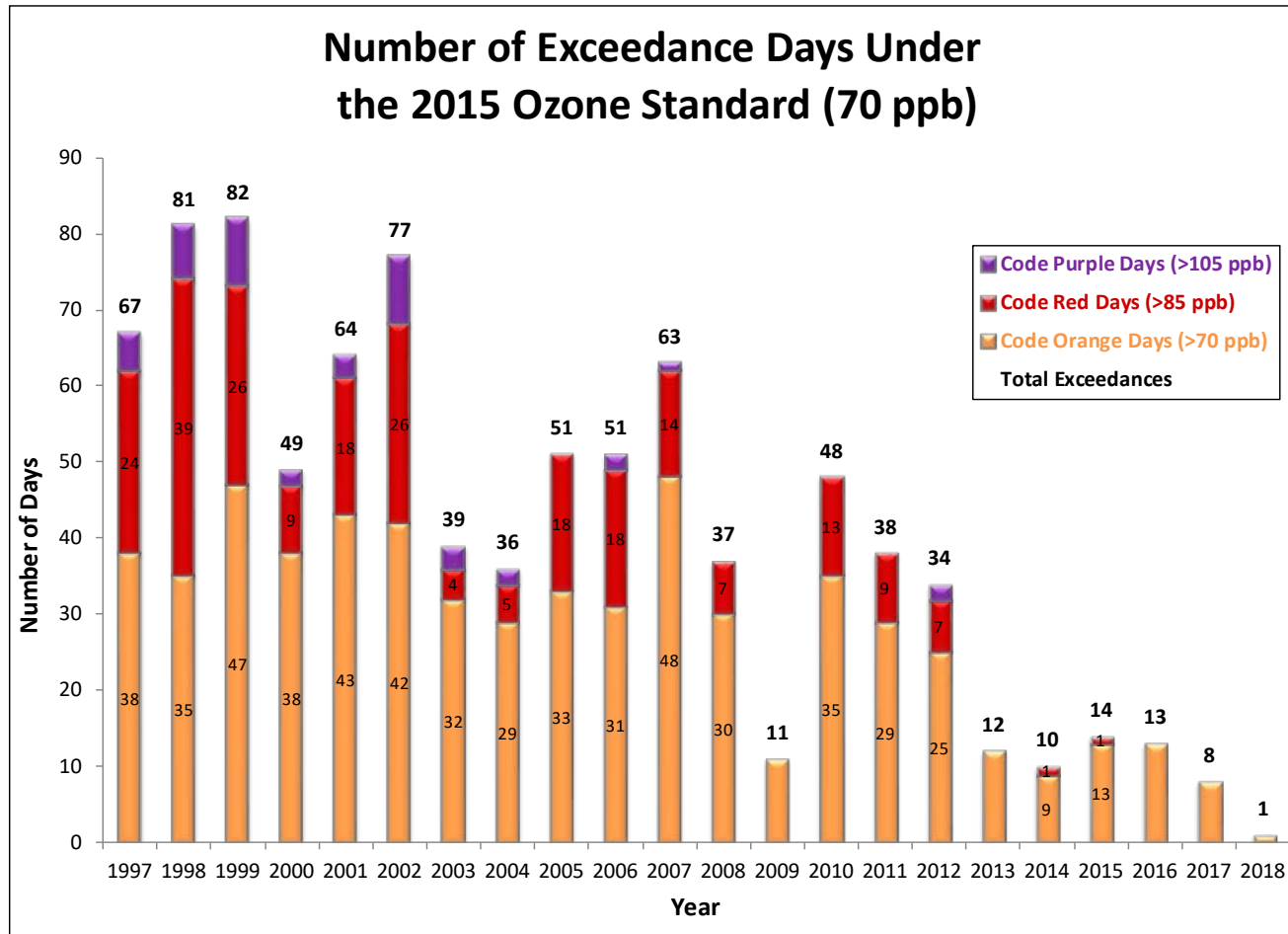
Meteorology on Exceedance Days

- May 2 (Seems influenced by both transported & local emissions)
 - High Temperature: 88°F, Clear sky
 - Light south westerly winds brought some ozone from upstream areas
 - Ozone build up on previous days

Wind Trajectories (May 2)



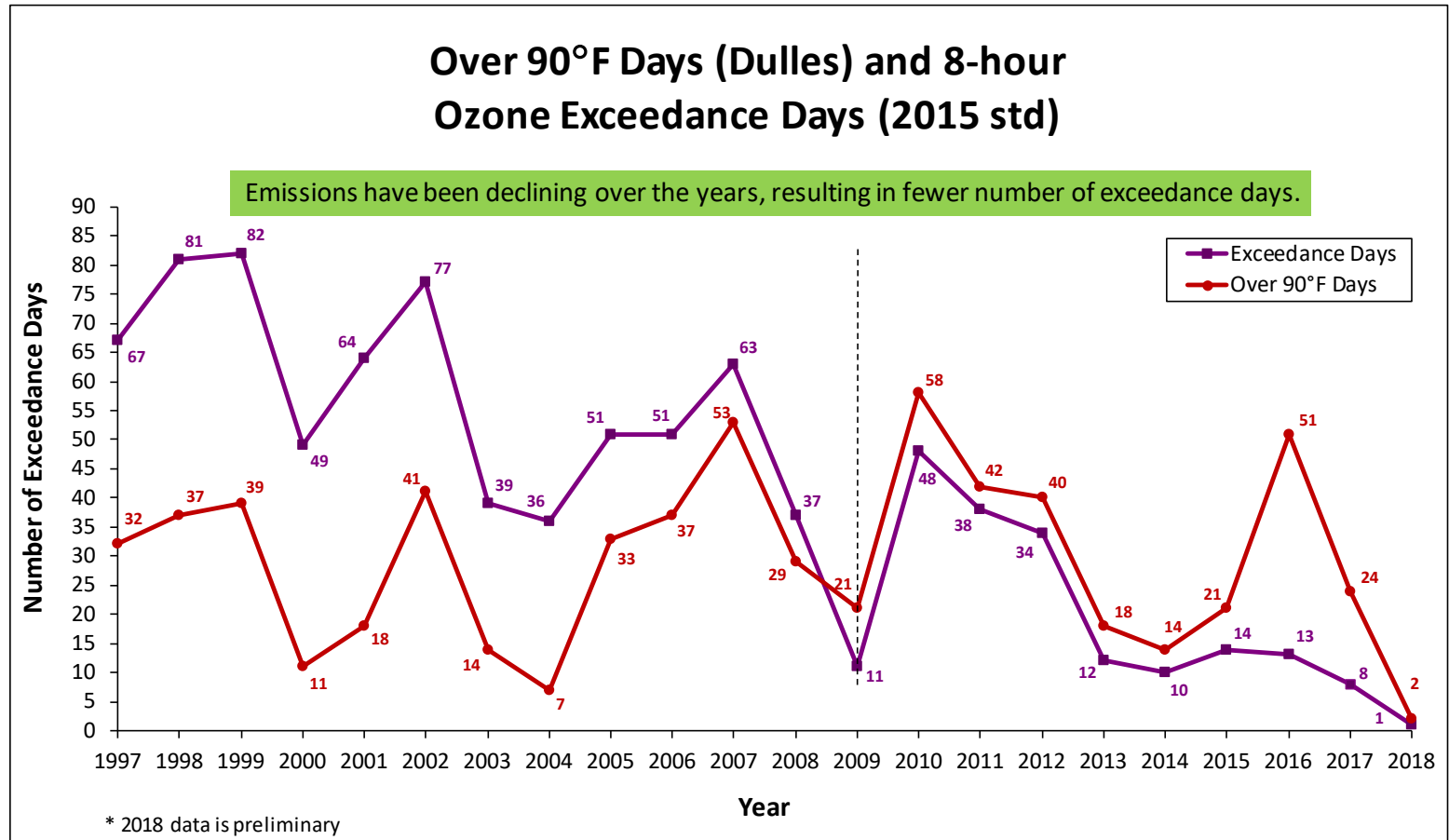
Ozone Exceedance Trend



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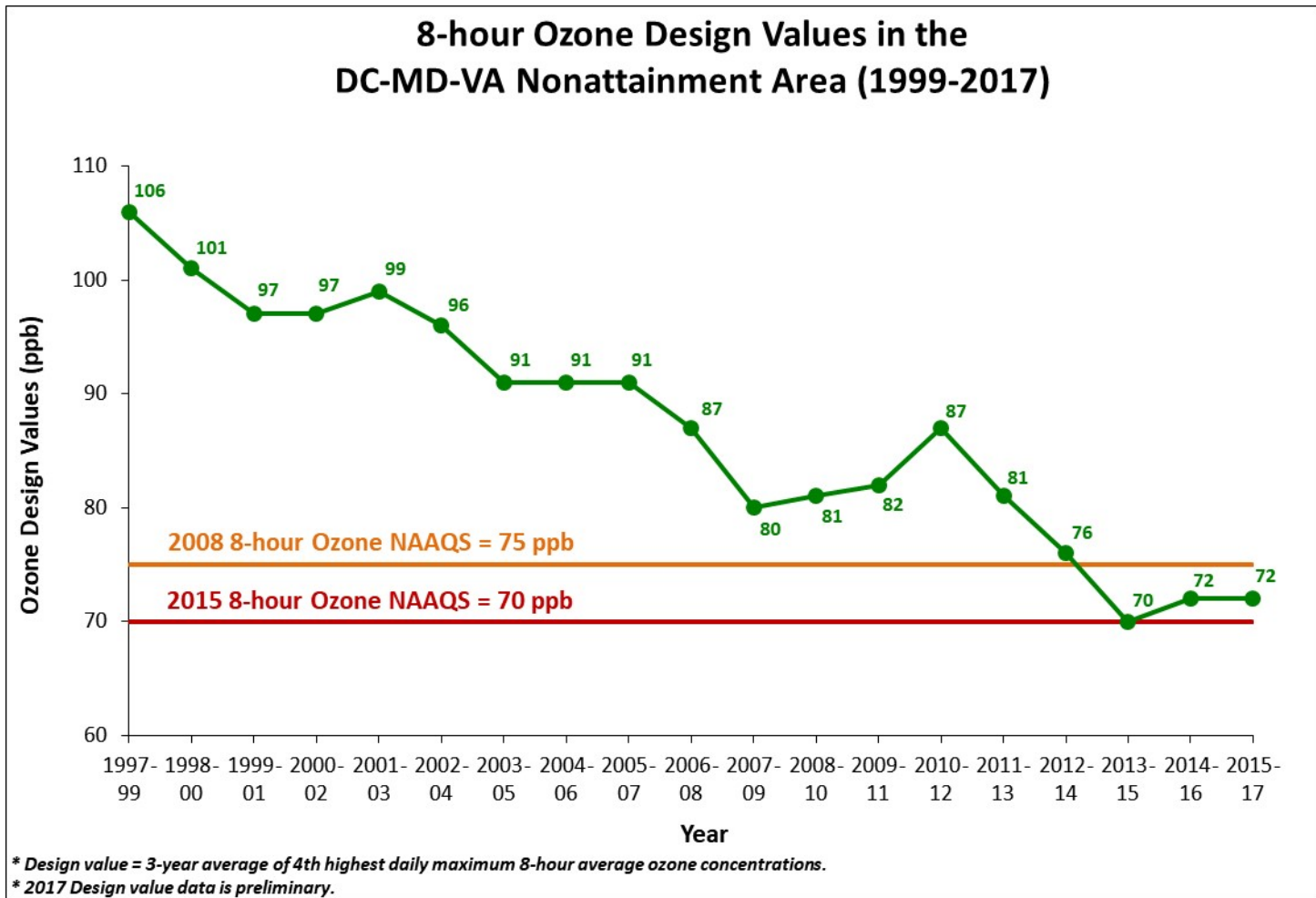


Ozone & Temperature Trend



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Ozone Design Value Trend



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



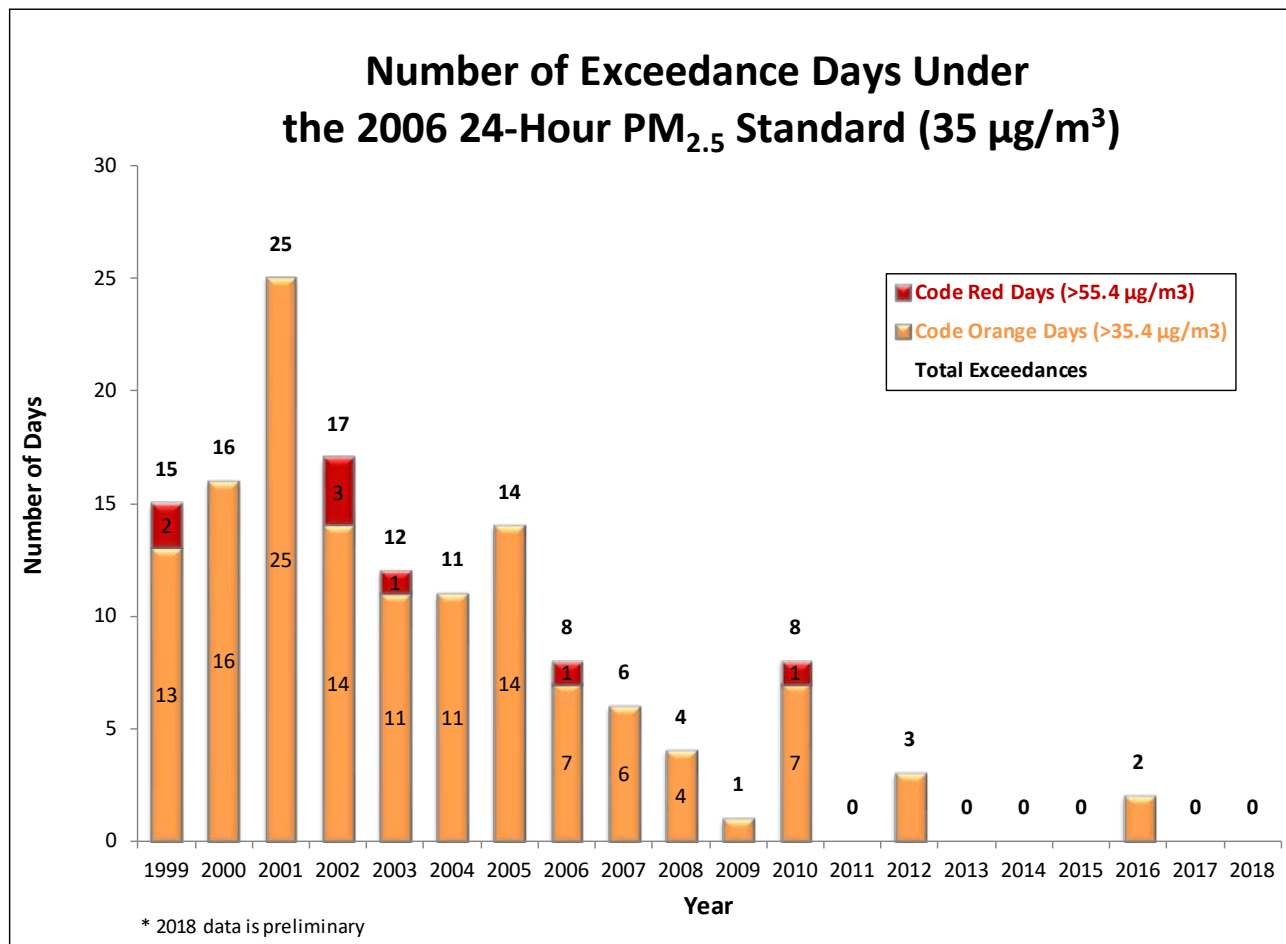
24-Hour Average PM2.5 Levels ($\mu\text{g}/\text{m}^3$)

April 2018							May 2018						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	31	29	30	01	02	03	04	05
									17.5	23.9	30.1	33.9	11.8
01	02	03	04	05	06	07	06	07	08	09	10	11	12
9.9	12.2	20.3	10.1	8.1	11.6	8.1	14.5						
08	09	10	11	12	13	14	13	14	15	16	17	18	19
10.3	13.3	17.1	16.0	20.3	23.1	23.5							
15	16	17	18	19	20	21	20	21	22	23	24	25	26
12.7	6.1	7.4	10.1	11.1	8.1	9.8							
22	23	24	25	26	27	28	27	28	29	30	31	01	02
10.1	10.1	9.1	5.8	8.8	9.6	15.9							
29	30	01	02	03	04	05	03	04	05	06	07	08	09
8.0	9.6												

15 Code Yellow Days, 21 Code Green Days

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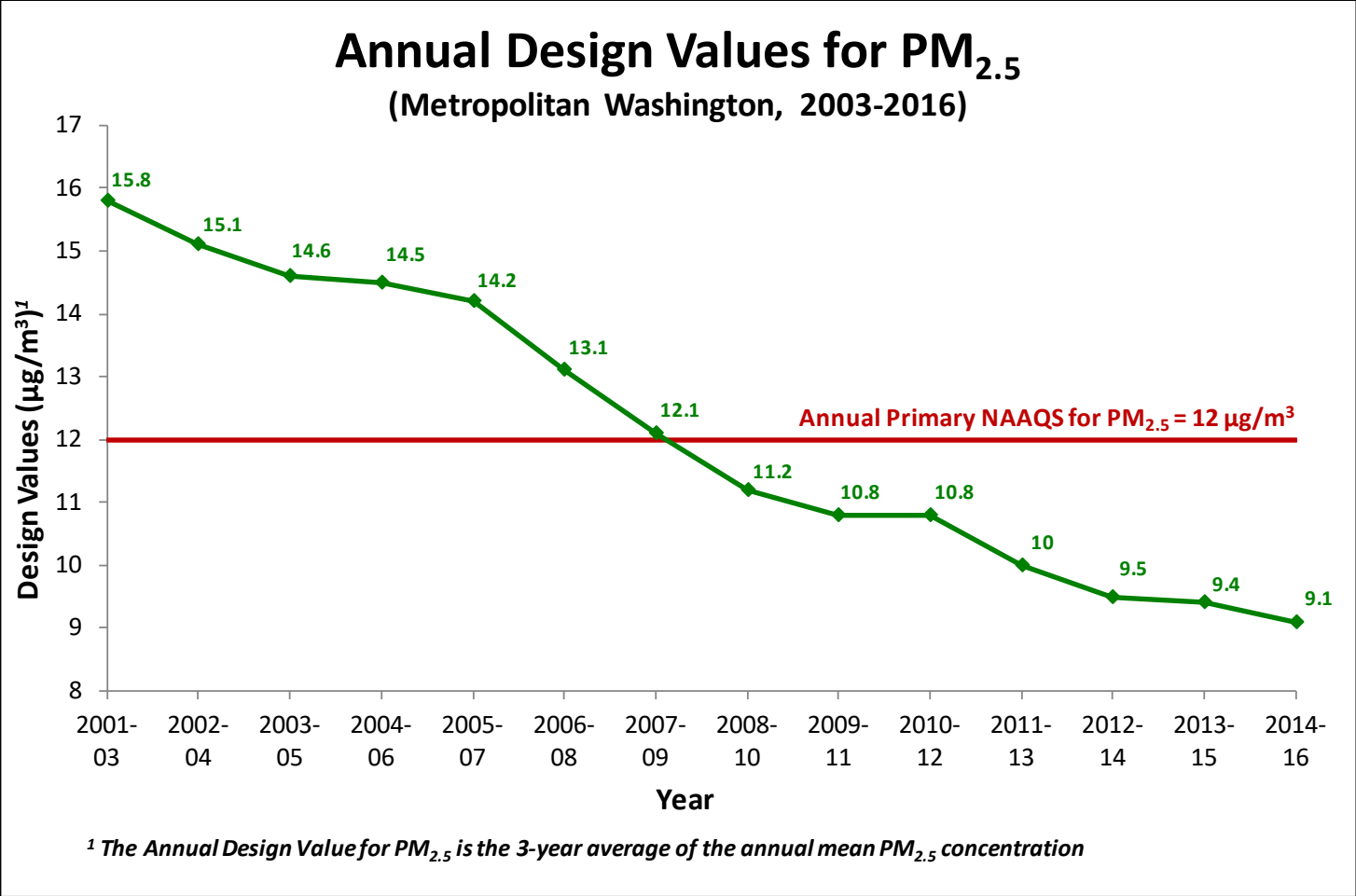
PM2.5 Exceedance Trend



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Annual PM2.5 Design Value Trend



24-Hour PM_{2.5} Design Value Trend

