

OZONE SEASON SUMMARY 2024

Sunil Kumar
Principal Environmental Engineer

MWAQC-TAC
June 11, 2024

Peak 8-Hour Average Ozone Levels (ppb)

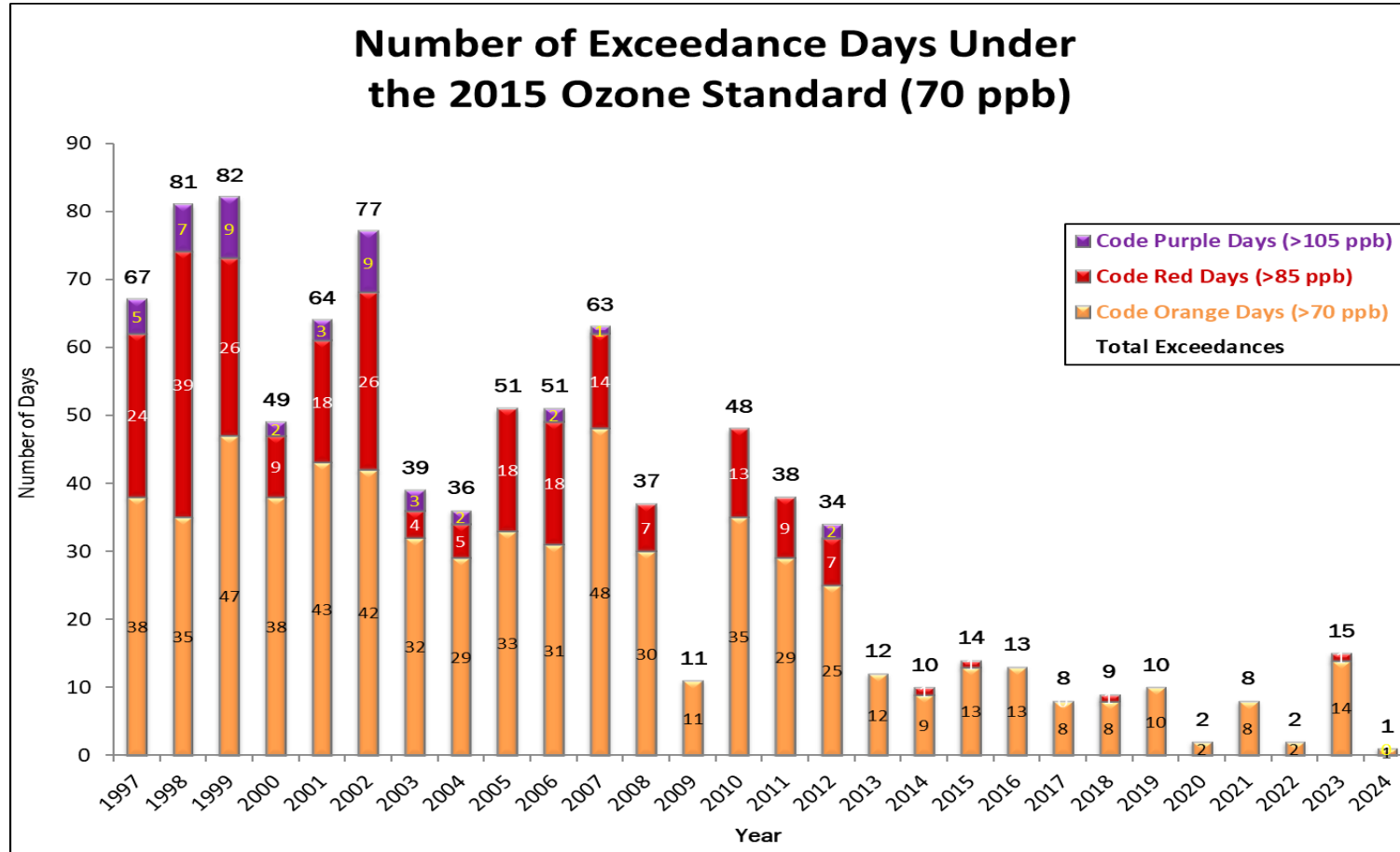
March 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	01	02
					44	40
03	04	05	06	07	08	09
42	44	33	24	39	38	39
10	11	12	13	14	15	16
40	46	54	57	63	54	47
17	18	19	20	21	22	23
48	43	42	52	44	42	42
24	25	26	27	28	29	30
46	48	42	34	46	55	53
31						
52						

April 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	01	02	03	04	05	06
	43	44	43	40	42	43
07	08	09	10	11	12	13
48	51	60	58	44	50	52
14	15	16	17	18	19	20
58	60	60	51	50	38	53
21	22	23	24	25	26	27
40	51	56	58	41	44	41
28	29	30				
53	60	59				

May 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	01	02	03	04
			62	70	52	32
05	06	07	08	09	10	11
31	34	46	52	49	41	42
12	13	14	15	16	17	18
41	51	47	41	46	41	40
19	20	21	22	23	24	25
47	52	58	62	57	72	68
26	27	28	29	30	31	
63	38	55	50	49	53	

June 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	01
						67
02	03	04	05	06	07	08
54	52	67				
09	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

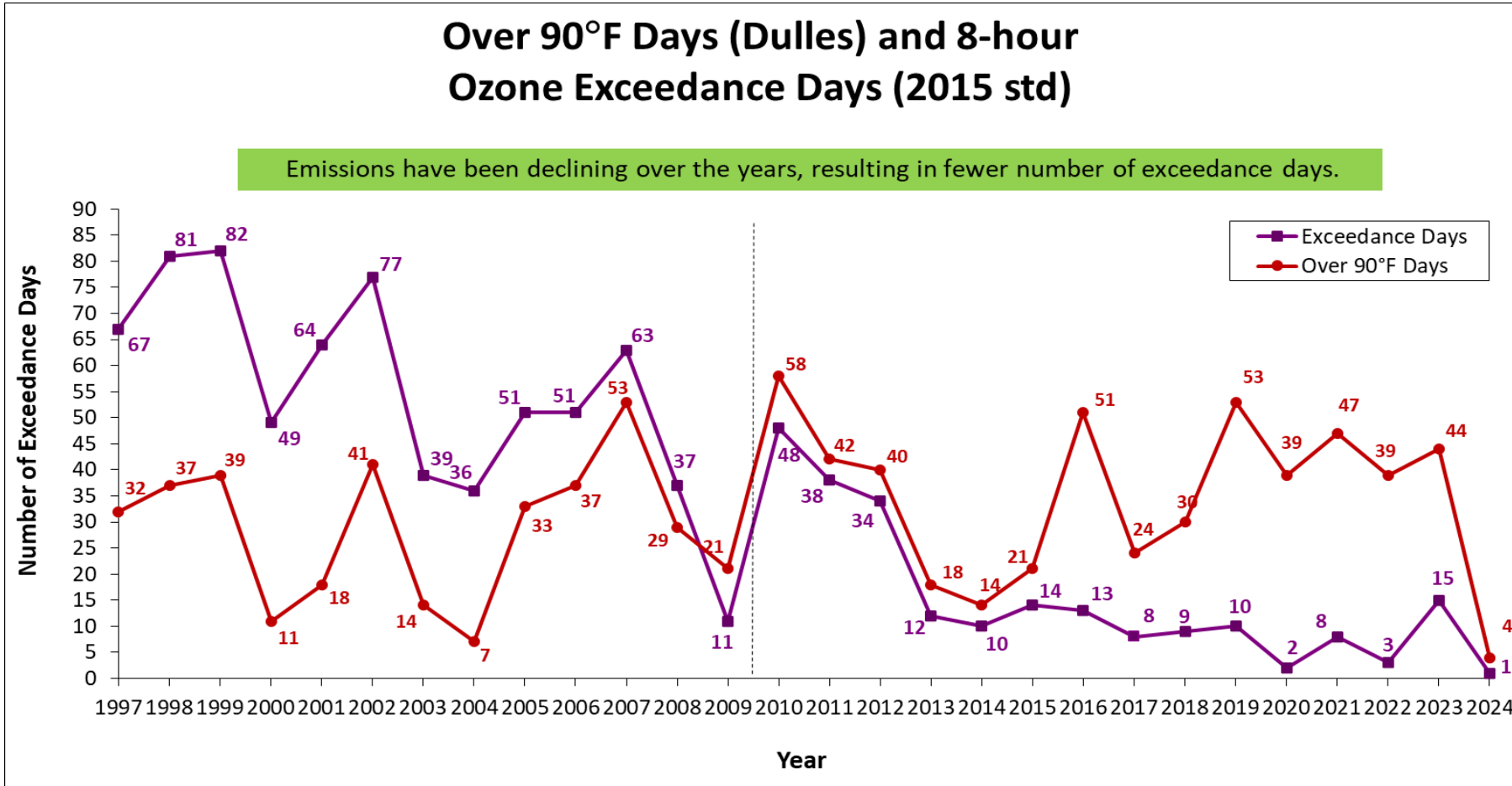
Ozone Exceedance Trend



* 2024 Data is preliminary.

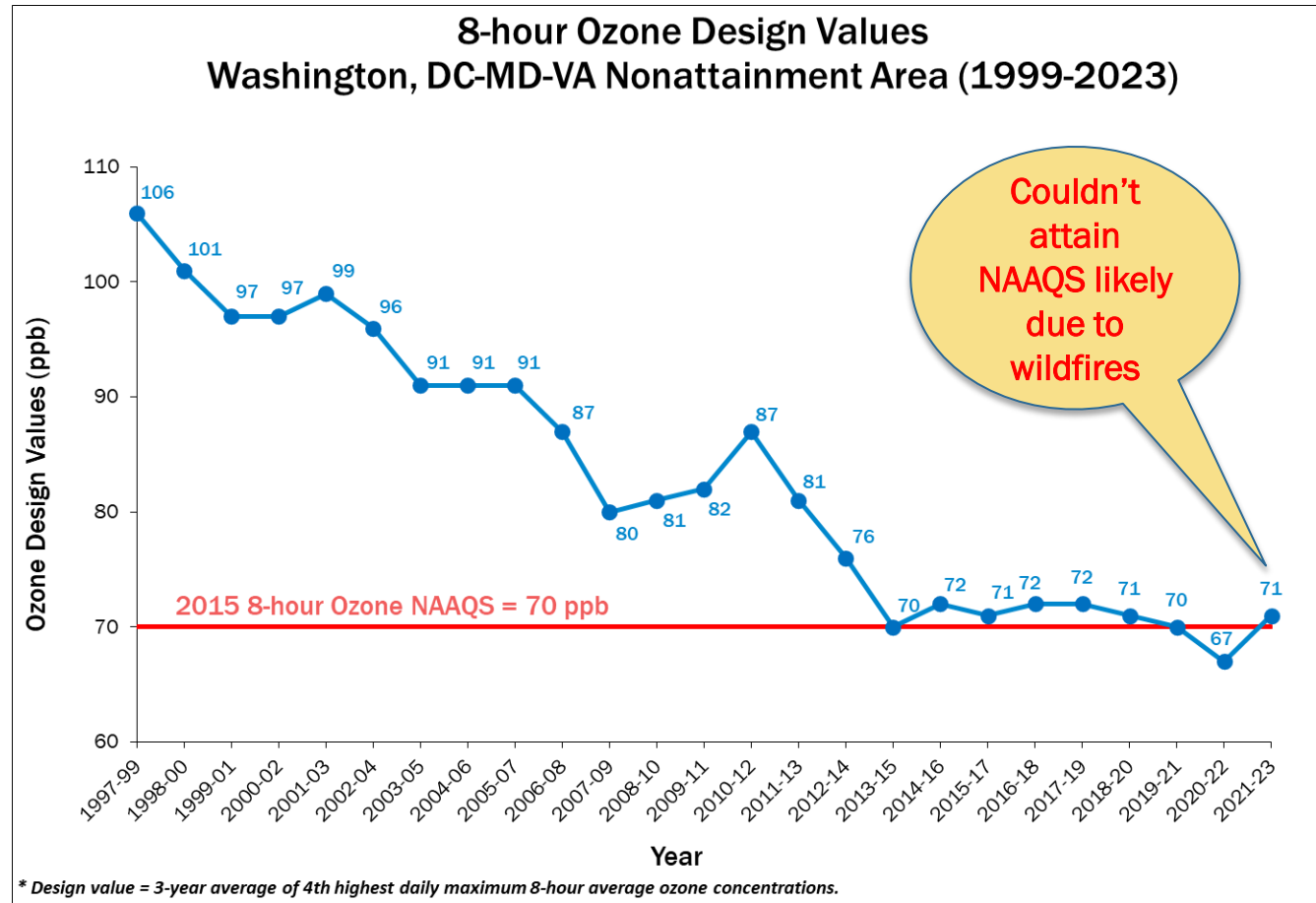


Ozone & Temperature Trend



* 2024 Data is preliminary.

Ozone Design Value Trends



Note: 2021-23 data is preliminary. States requested “Exceptional Events Exemption” to exclude data influenced by wildfires. The region is expected to attain after EPA has granted that request.

Why Fewer Exceedance Days Now ?

Emission Control Programs

Federal	State	Local
Acid Rain Program (1996/2000)	Vehicle Inspection & Maintenance Programs	Renewable Energy Programs Regional Wind Power Purchase Program Clean Energy Rewards Program Renewable Portfolio Standards
Tier 2 (LD Vehicle) Rule (2004)	Maryland Healthy Air Act (2009/2012)	Energy Efficiency Programs LED Traffic Signal Retrofit program Building Energy Efficiency Programs
HD Diesel vehicle Rule (2004/2007)	Virginia CSAPR Rule	VRE Idling Reduction
NOX SIP Call (2004)	Ozone Transport Commission Rules	LOW VOC Paint
CAIR/CSAPR/CSAPR Update/Revised CSAPR Update (2009/2015/2017/2021)		Gas Can Replacement



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

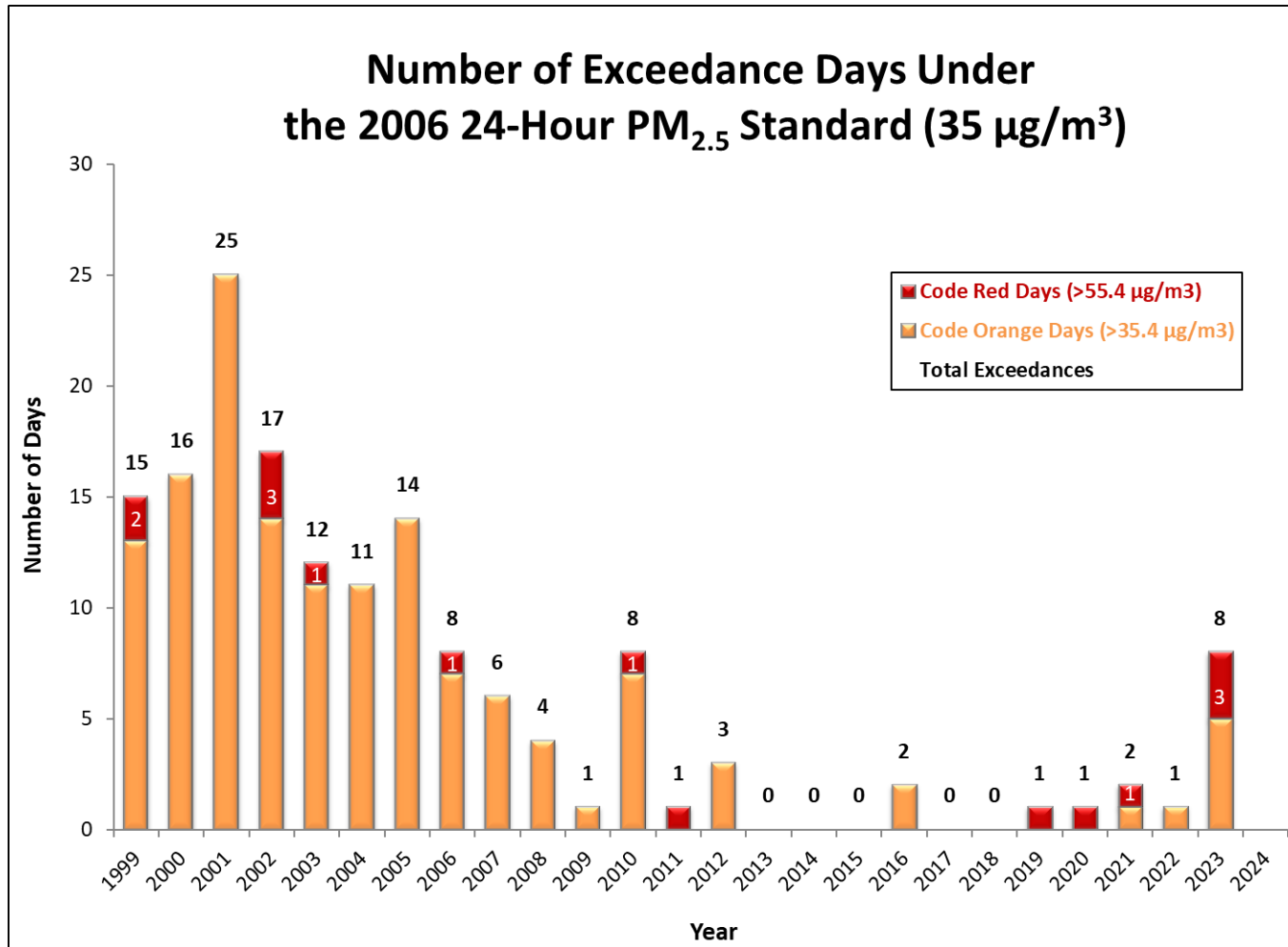
March 2024							April 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	01	02	31	01	02	03	04	05	06
					6.1	4.8		8.3	6.1	3.7	3.4	2.0	3.0
03	04	05	06	07	08	09	07	08	09	10	11	12	13
7.0	5.8	3.2	7.9	3.8	4.7	5.6	3.3	9.0	13.7	9.5	8.2	3.0	3.2
10	11	12	13	14	15	16	14	15	16	17	18	19	20
2.3	1.9	6.9	10.4	13.0	10.7	4.9	7.0	10.9	6.3	10.9	10.9	12.7	8.1
17	18	19	20	21	22	23	21	22	23	24	25	26	27
5.0	3.8	3.8	7.6	5.0	7.3	5.9	4.1	5.6	6.8	6.1	5.7	5.6	6.7
24	25	26	27	28	29	30	28	29	30				
4.9	6.6	7.1	7.3	9.1	7.5	7.4	12.0	11.4	13.9				
31													
9.2													
May 2024							June 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	01	02	03	04	26	27	28	29	30	31	01
			6.7	9.8	8.6	4.1							7.0
05	06	07	08	09	10	11	02	03	04	05	06	07	08
6.0	8.7	9.4	9.3	8.3	4.4	3.4	11.5	10.0	11.6				
12	13	14	15	16	17	18	09	10	11	12	13	14	15
4.4	6.1	8.0	4.8	6.1	5.2	7.3							
19	20	21	22	23	24	25	16	17	18	19	20	21	22
10.2	9.6	8.4	10.2	10.9	10.8	11.8							
26	27	28	29	30	31		23	24	25	26	27	28	29
9.7	7.6	4.7	6.5	5.2	6.0								
							30						

A new tougher annual PM2.5 standard (9.0 ug/m3) became effective May 6, 2024.

This may lead to an increase in code yellow (moderate), code red (unhealthy), and worse (very unhealthy and hazardous) PM2.5 days.

* 2024 Data is preliminary.

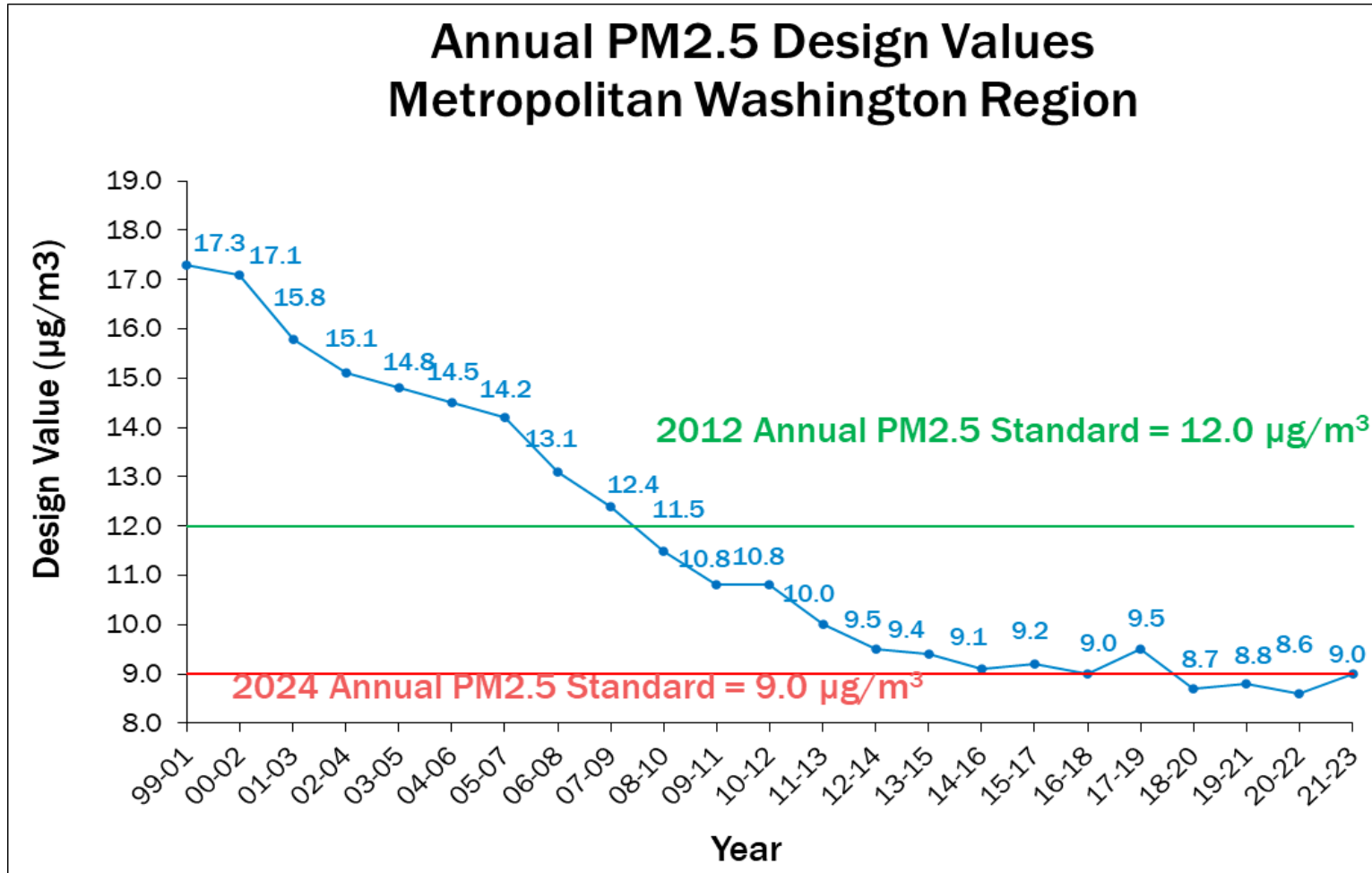
PM2.5 Exceedance Trend



* 2024 Data is preliminary.



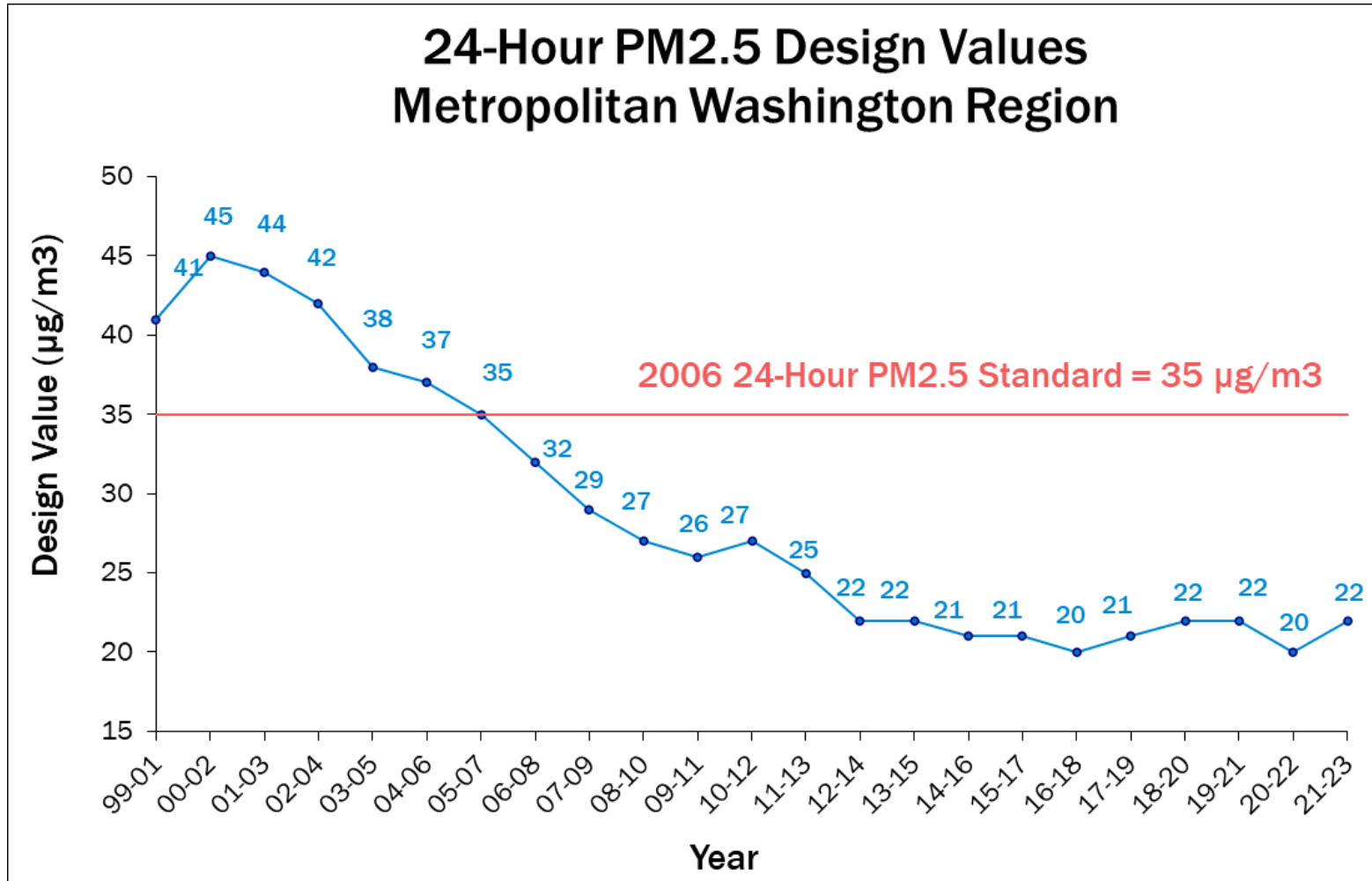
Annual PM2.5 Design Value Trend



New annual PM2.5 standard (9.0 ug/m3) became effective May 6, 2024

* 2021-23 Data is preliminary.

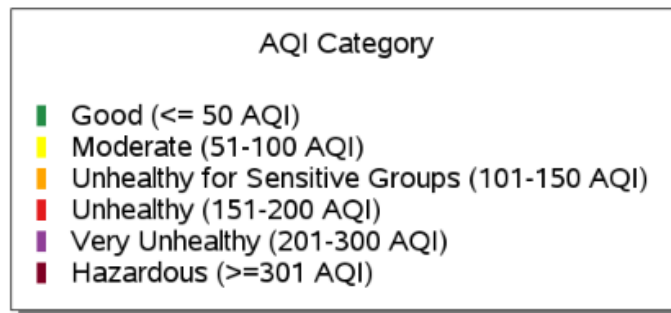
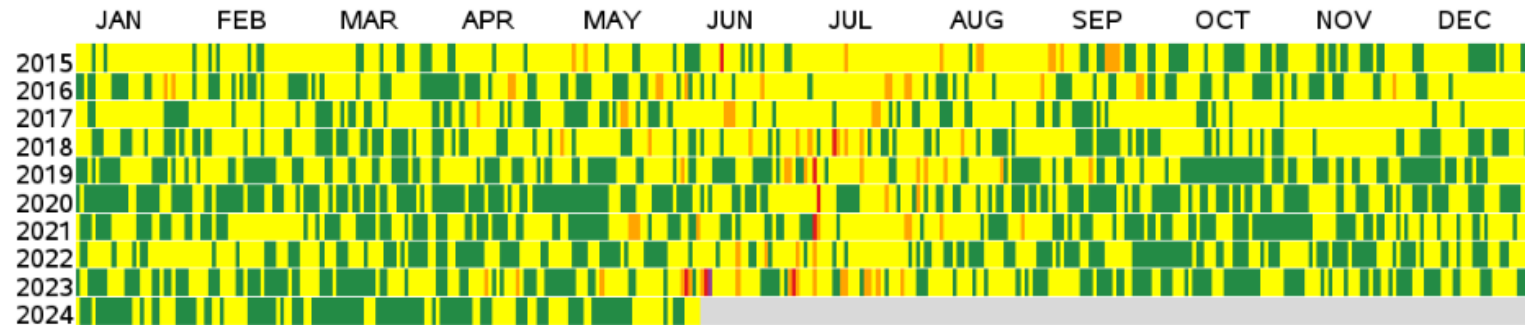
24-Hour PM2.5 Design Value Trend



* 2021-23 Data is preliminary.

AQI Value Trends

Daily AQI Values, 2015 to 2024
Washington-Arlington-Alexandria, DC-VA-MD-WV

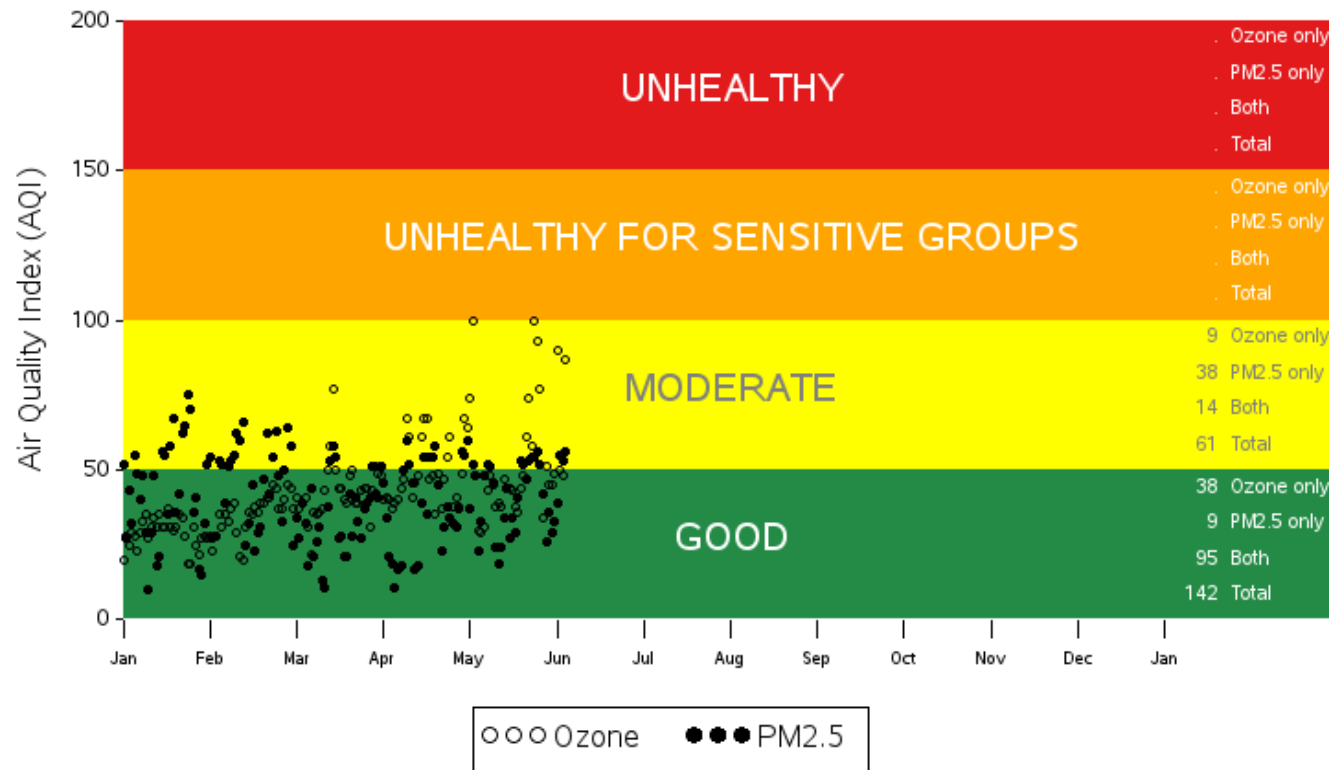


Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>
Generated: June 5, 2024

Note: Data shown above is for combined AQI values for ozone, PM2.5, PM10, CO, NO2, and SO2 for the Washington-Arlington-Alexandria CBSA.

AQI Values - 2024

Daily Ozone and PM2.5 AQI Values in 2024
Washington-Arlington-Alexandria, DC-VA-MD-WV



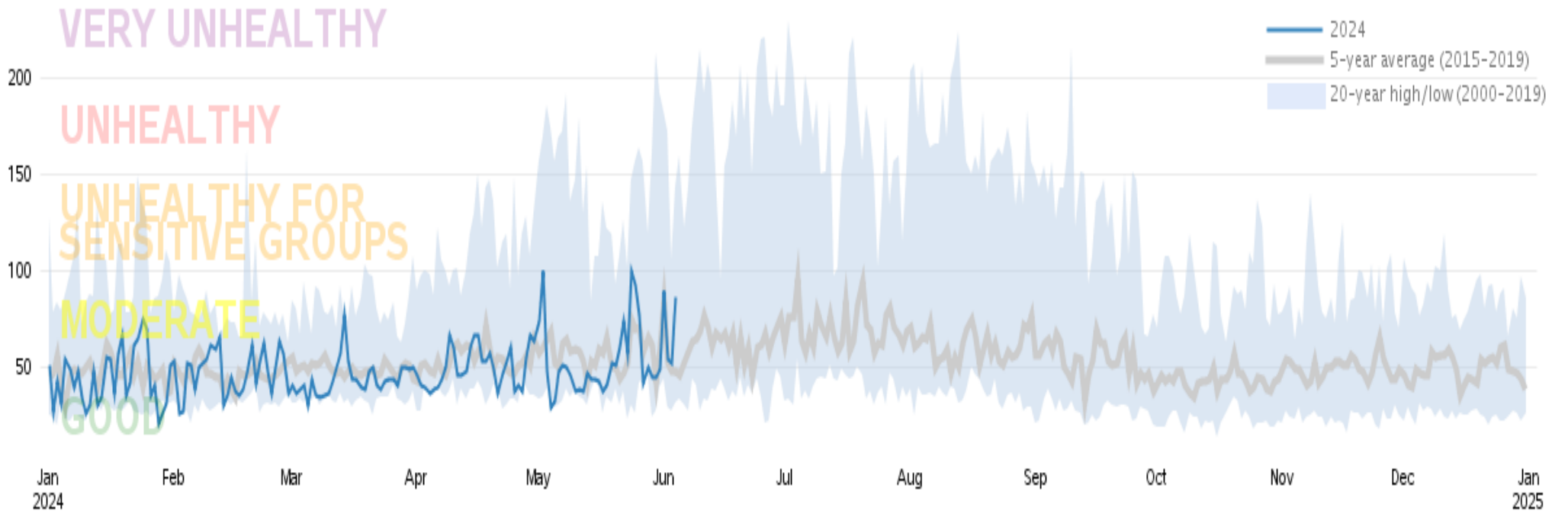
Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>
Generated: June 5, 2024



AQI Value Trends

Combined Ozone and PM2.5 Daily AQI Values

Washington-Arlington-Alexandria, DC-VA-MD-WV



Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>

Generated: June 5, 2024

Note: Data shown above is for the Washington-Arlington-Alexandria CBSA.



Metropolitan Washington
Council of Governments

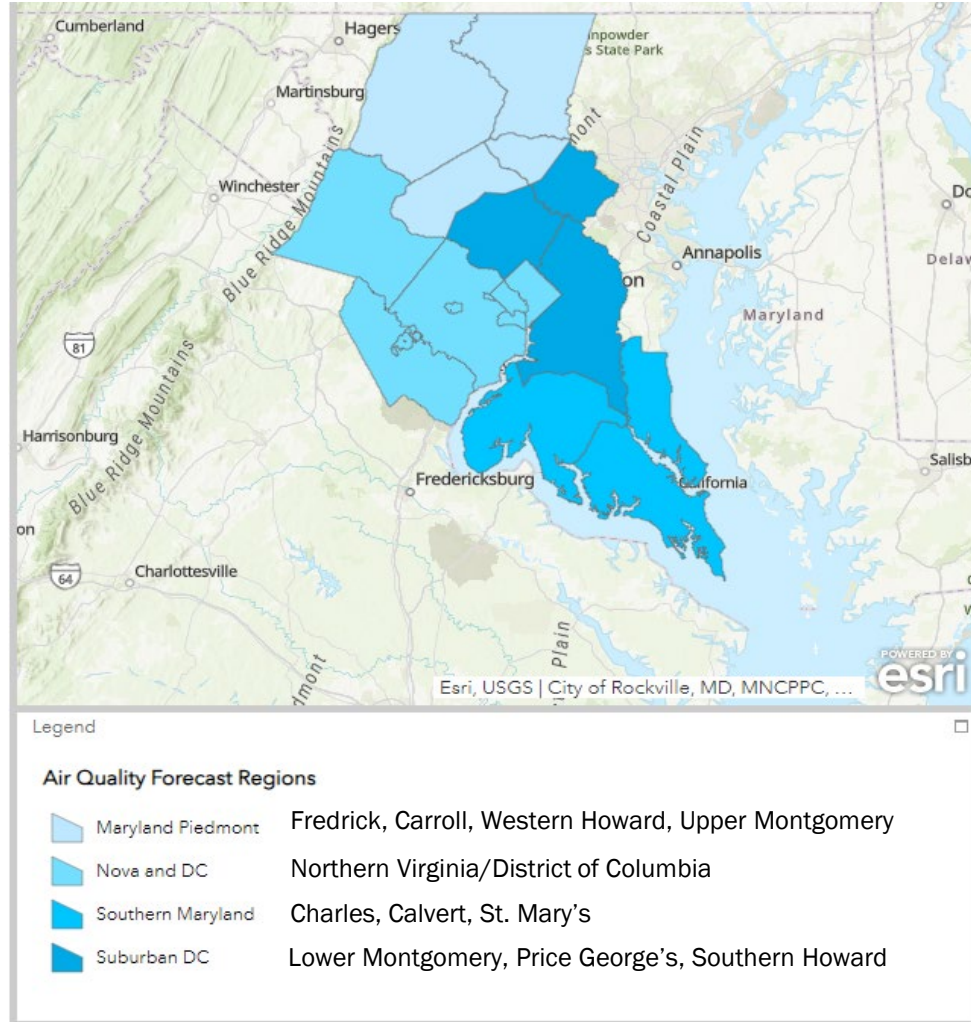
Minimum 4th High Ozone Levels Needed in 2024 To Maintain Compliance With 2015 Ozone NAAQS

Monitor	4 th High Ozone Needed (ppb)	Observed Draft 4 th High Ozone (ppb)*	Draft 2022-24 Design Value (ppb)*
McMillan (DC)	72	65	-
Beltsville (MD)	76	64	-
Prince George's Equestrian Center	76	61	-

* Based on data as of June 5, 2024. Insufficient data as of June 5th for Design Value calculation.



New Air Quality Forecast Subregions



Washington DC forecast region has now been divided into 4 separate subregions to provide more accurate forecasts that reflect local conditions.



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