

# OZONE SEASON SUMMARY 2024

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MWAQC-TAC  
September 10, 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	39
03	04	05	06	07	08	09
42	44	30	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	31	46	55	53
31						
52						

April 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	01	02	03	04	05	06
	43	44	42	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	35	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	26
05	06	07	08	09	10	11
31	34	46	52	49	26	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	49	49	53	

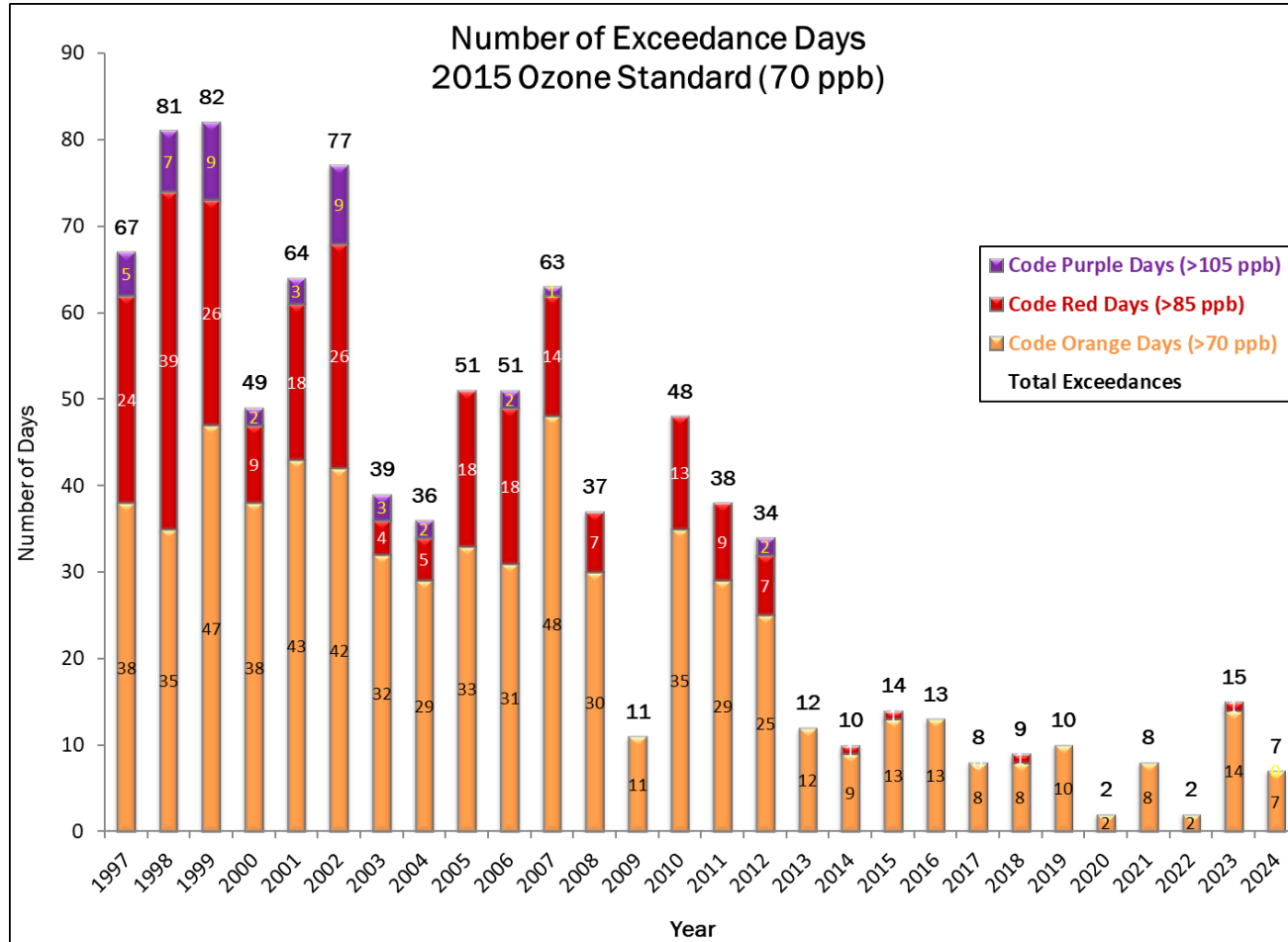
June 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	01
						67
02	03	04	05	06	07	08
54	52	67	43	48	55	56
09	10	11	12	13	14	15
51	55	43	58	65	72	55
16	17	18	19	20	21	22
60	67	63	66	61	67	76
23	24	25	26	27	28	29
49	53	55	68	67	60	53
30						
51						

July 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	01	02	03	04	05	06
	39	52	57	58	54	55
07	08	09	10	11	12	13
62	70	59	45	67	47	55
14	15	16	17	18	19	20
62	65	60	69	53	62	49
21	22	23	24	25	26	27
65	41	65	55	56	57	52
28	29	30	31			
69	72	42	61			

August 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	01	02	03
				80	52	50
04	05	06	07	08	09	10
53	67	58	35	28	31	57
11	12	13	14	15	16	17
52	53	48	50	50	54	44
18	19	20	21	22	23	24
47	43	37	40	48	64	63
25	26	27	28	29	30	31
58	56	74	76	66	26	40

\* 2024 Data is preliminary.

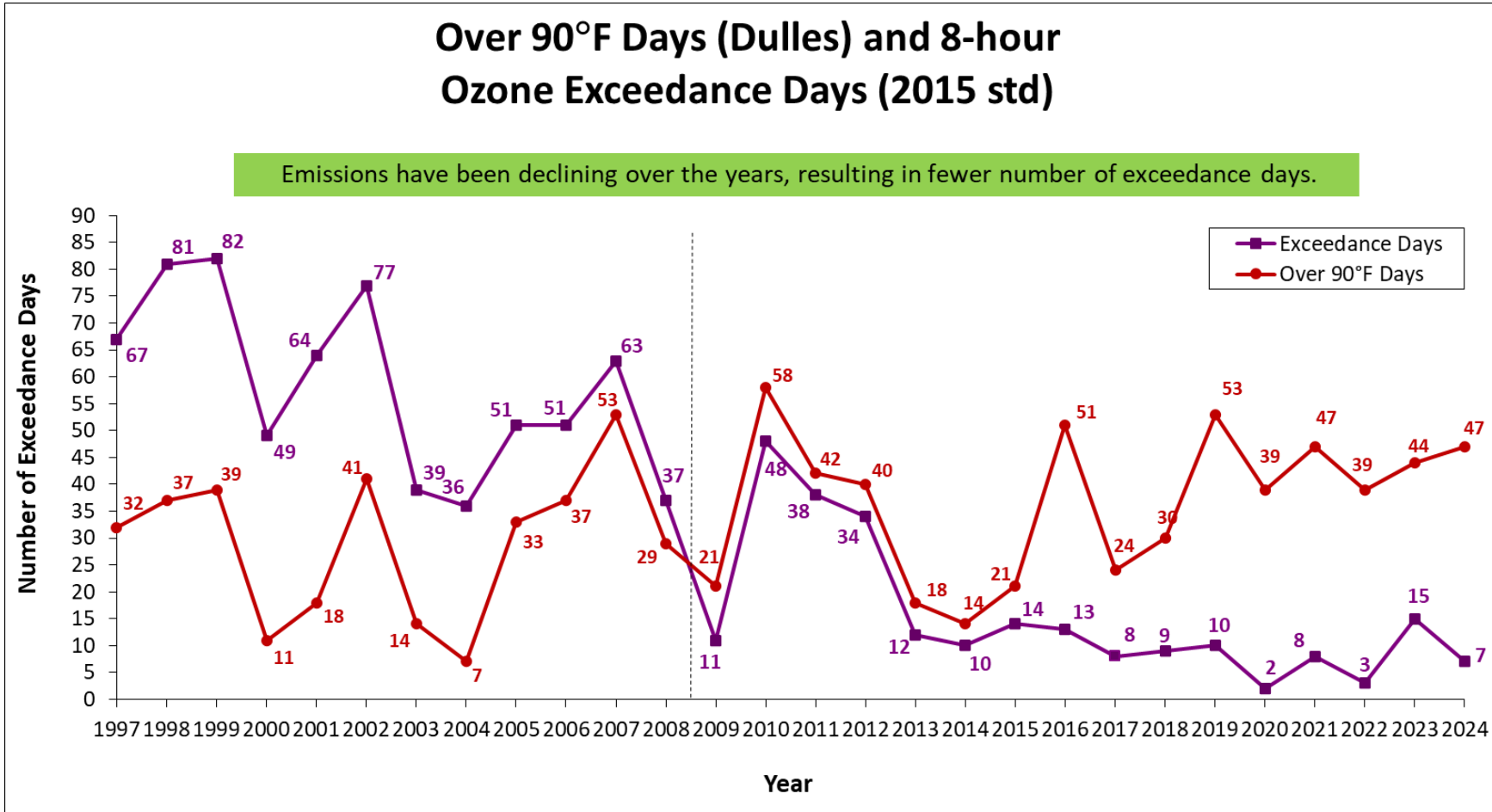
# Ozone Exceedance Trend



\* 2024 Data is preliminary.

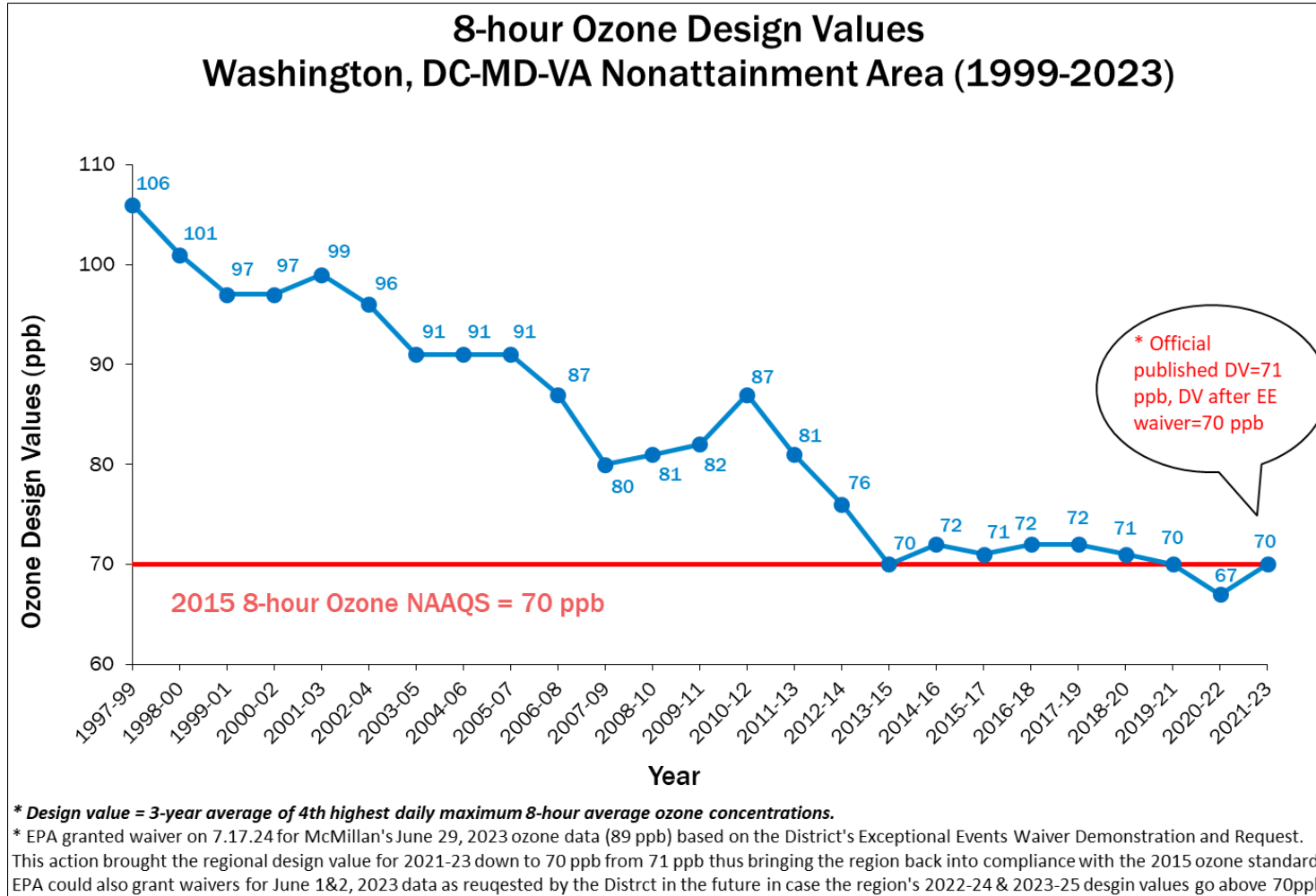


# Ozone & Temperature Trend

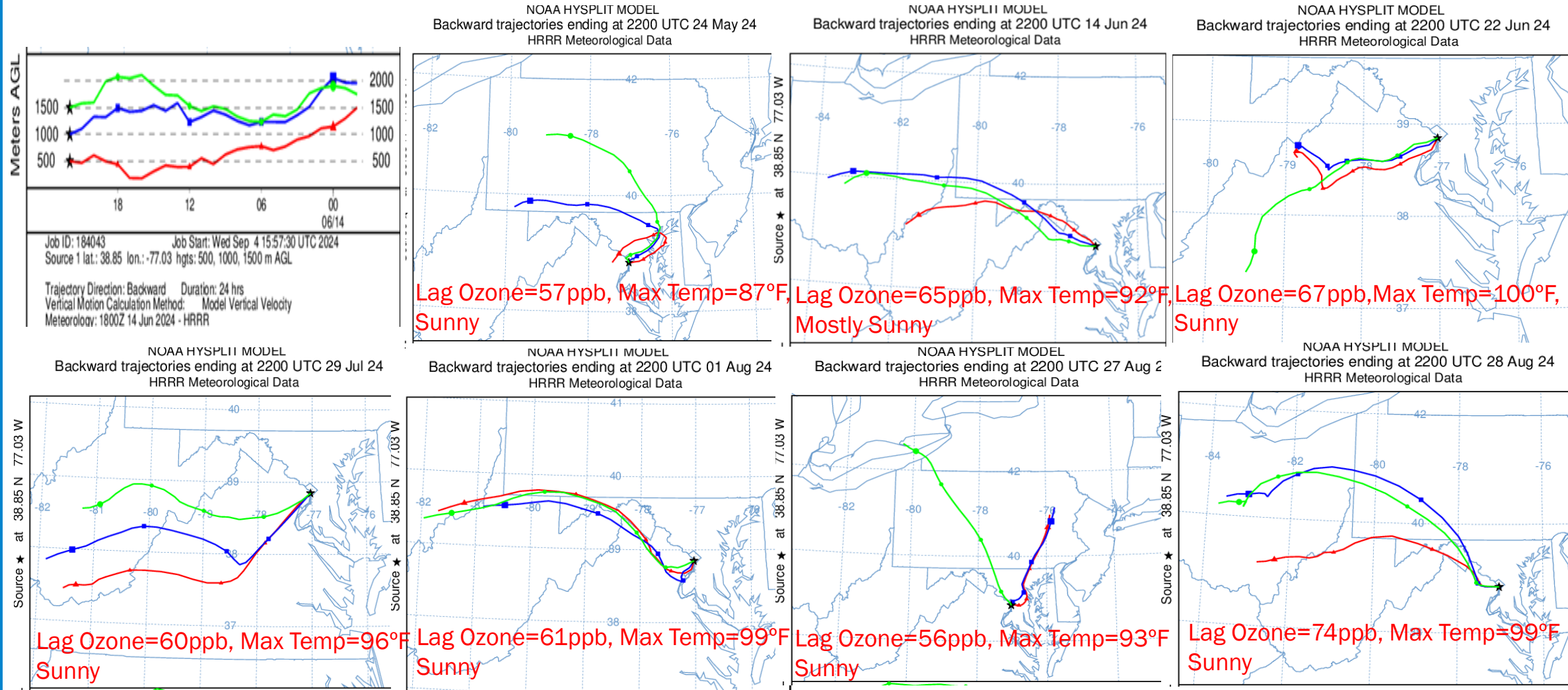


\* 2024 Data is preliminary.

# Ozone Design Value Trends



# Weather & Wind Trajectories on Exceedance Days



# 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						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	01	02
					<b>6.1</b>	<b>4.8</b>
03	04	05	06	07	08	09
<b>7.0</b>	<b>5.8</b>	<b>3.2</b>	<b>7.9</b>	<b>3.8</b>	<b>4.7</b>	<b>5.6</b>
10	11	12	13	14	15	16
<b>2.3</b>	<b>1.9</b>	<b>6.9</b>	<b>10.4</b>	<b>13.0</b>	<b>10.7</b>	<b>4.9</b>
17	18	19	20	21	22	23
<b>5.0</b>	<b>3.8</b>	<b>3.8</b>	<b>7.6</b>	<b>5.0</b>	<b>7.3</b>	<b>5.9</b>
24	25	26	27	28	29	30
<b>4.9</b>	<b>6.6</b>	<b>7.1</b>	<b>7.3</b>	<b>9.1</b>	<b>7.5</b>	<b>7.4</b>
31						
<b>9.2</b>						

April 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	01	02	03	04	05	06
	<b>8.3</b>	<b>6.1</b>	<b>3.7</b>	<b>3.4</b>	<b>2.0</b>	<b>3.0</b>
07	08	09	10	11	12	13
<b>3.3</b>	<b>9.0</b>	<b>13.7</b>	<b>9.5</b>	<b>8.2</b>	<b>3.0</b>	<b>3.2</b>
14	15	16	17	18	19	20
<b>7.0</b>	<b>10.9</b>	<b>6.3</b>	<b>10.9</b>	<b>10.9</b>	<b>12.7</b>	<b>8.1</b>
21	22	23	24	25	26	27
<b>4.1</b>	<b>5.6</b>	<b>6.8</b>	<b>6.1</b>	<b>5.7</b>	<b>5.6</b>	<b>6.7</b>
28	29	30				
<b>12.0</b>	<b>11.4</b>	<b>13.9</b>				

May 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	01	02	03	04
			<b>6.7</b>	<b>9.8</b>	<b>8.6</b>	<b>4.1</b>
05	06	07	08	09	10	11
<b>6.0</b>	<b>8.7</b>	<b>9.4</b>	<b>9.3</b>	<b>8.3</b>	<b>4.4</b>	<b>3.4</b>
12	13	14	15	16	17	18
<b>4.4</b>	<b>6.1</b>	<b>8.0</b>	<b>4.8</b>	<b>6.1</b>	<b>5.2</b>	<b>7.3</b>
19	20	21	22	23	24	25
<b>10.2</b>	<b>9.6</b>	<b>8.4</b>	<b>10.2</b>	<b>10.9</b>	<b>10.8</b>	<b>11.8</b>
26	27	28	29	30	31	
<b>9.7</b>	<b>7.6</b>	<b>4.7</b>	<b>6.5</b>	<b>5.2</b>	<b>6.0</b>	

June 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	01
						<b>7.0</b>
02	03	04	05	06	07	08
<b>11.5</b>	<b>10.0</b>	<b>11.6</b>	<b>12.4</b>	<b>9.2</b>	<b>5.6</b>	<b>7.3</b>
09	10	11	12	13	14	15
<b>7.4</b>	<b>6.5</b>	<b>6.4</b>	<b>8.7</b>	<b>14.6</b>	<b>12.2</b>	<b>8.2</b>
16	17	18	19	20	21	22
<b>9.2</b>	<b>12.4</b>	<b>12.3</b>	<b>8.0</b>	<b>8.4</b>	<b>10.2</b>	<b>15.1</b>
23	24	25	26	27	28	29
<b>10.8</b>	<b>6.7</b>	<b>9.9</b>	<b>10.0</b>	<b>6.5</b>	<b>6.4</b>	<b>8.8</b>
30						
<b>11.1</b>						

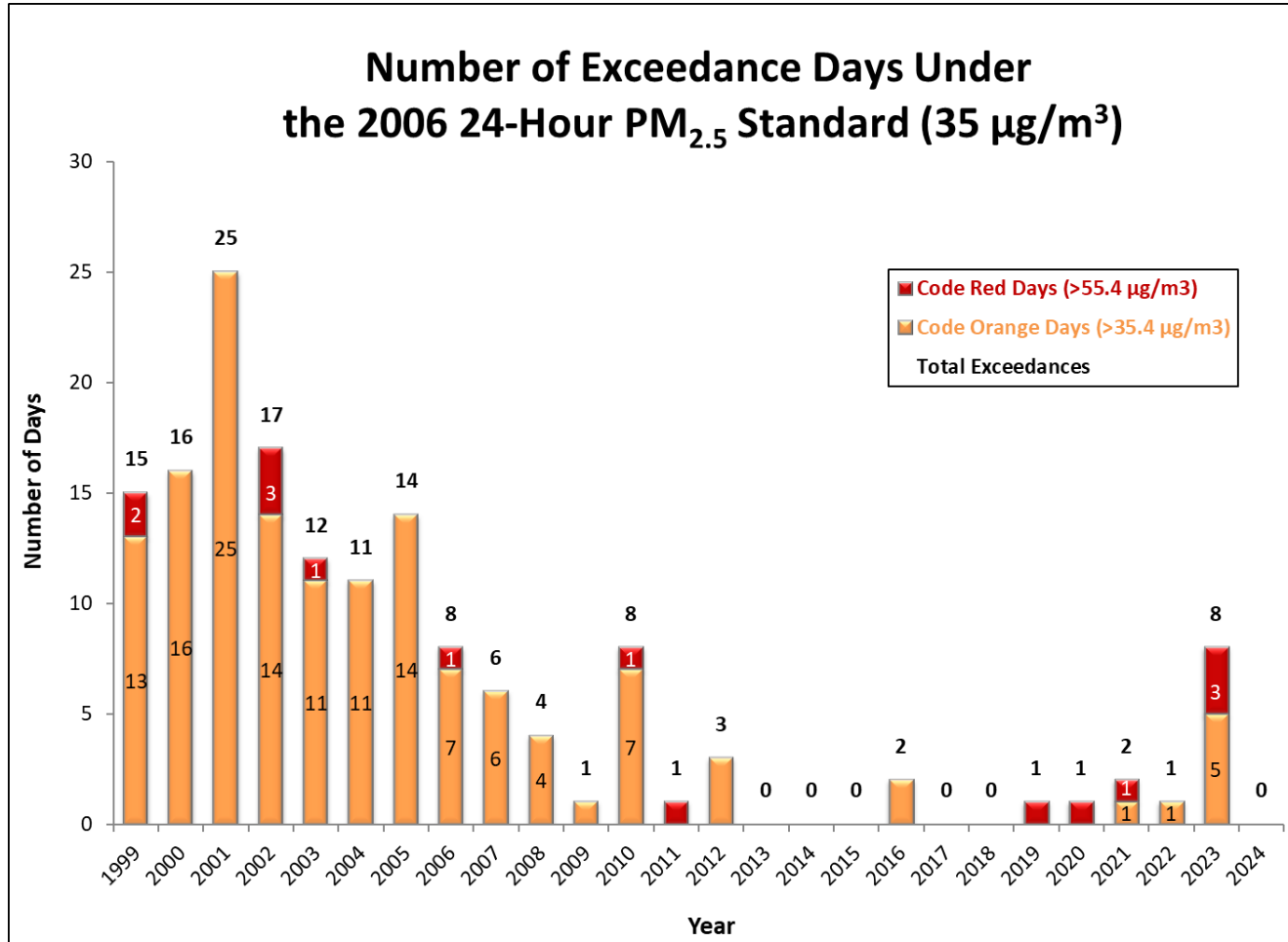
July 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	01	02	03	04	05	06
	<b>4.7</b>	<b>5.5</b>	<b>7.7</b>	<b>29.5</b>	<b>15.3</b>	<b>9.1</b>
07	08	09	10	11	12	13
<b>7.3</b>	<b>12.4</b>	<b>12.0</b>	<b>9.7</b>	<b>4.7</b>	<b>7.2</b>	<b>6.2</b>
14	15	16	17	18	19	20
<b>11.6</b>	<b>13.7</b>	<b>14.5</b>	<b>10.2</b>	<b>9.7</b>	<b>9.4</b>	<b>9.7</b>
21	22	23	24	25	26	27
<b>10.6</b>	<b>8.2</b>	<b>7.1</b>	<b>7.5</b>	<b>14.6</b>	<b>9.6</b>	<b>7.7</b>
28	29	30	31			
<b>9.9</b>	<b>12.8</b>	<b>9.4</b>	<b>9.9</b>			

August 2024						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	01	02	03
				<b>15.3</b>	<b>11.9</b>	<b>11.6</b>
04	05	06	07	08	09	10
<b>7.4</b>	<b>11.3</b>	<b>9.7</b>	<b>5.7</b>	<b>7.3</b>	<b>6.1</b>	<b>10.9</b>
11	12	13	14	15	16	17
<b>7.4</b>	<b>6.5</b>	<b>6.7</b>	<b>17.0</b>	<b>19.0</b>	<b>16.6</b>	<b>15.0</b>
18	19	20	21	22	23	24
<b>9.5</b>	<b>5.1</b>	<b>5.7</b>	<b>5.7</b>	<b>6.5</b>	<b>9.5</b>	<b>10.0</b>
25	26	27	28	29	30	31
<b>10.5</b>	<b>13.0</b>	<b>13.3</b>	<b>13.9</b>	<b>11.4</b>	<b>4.9</b>	<b>5.7</b>

\* 2024 Data is preliminary.



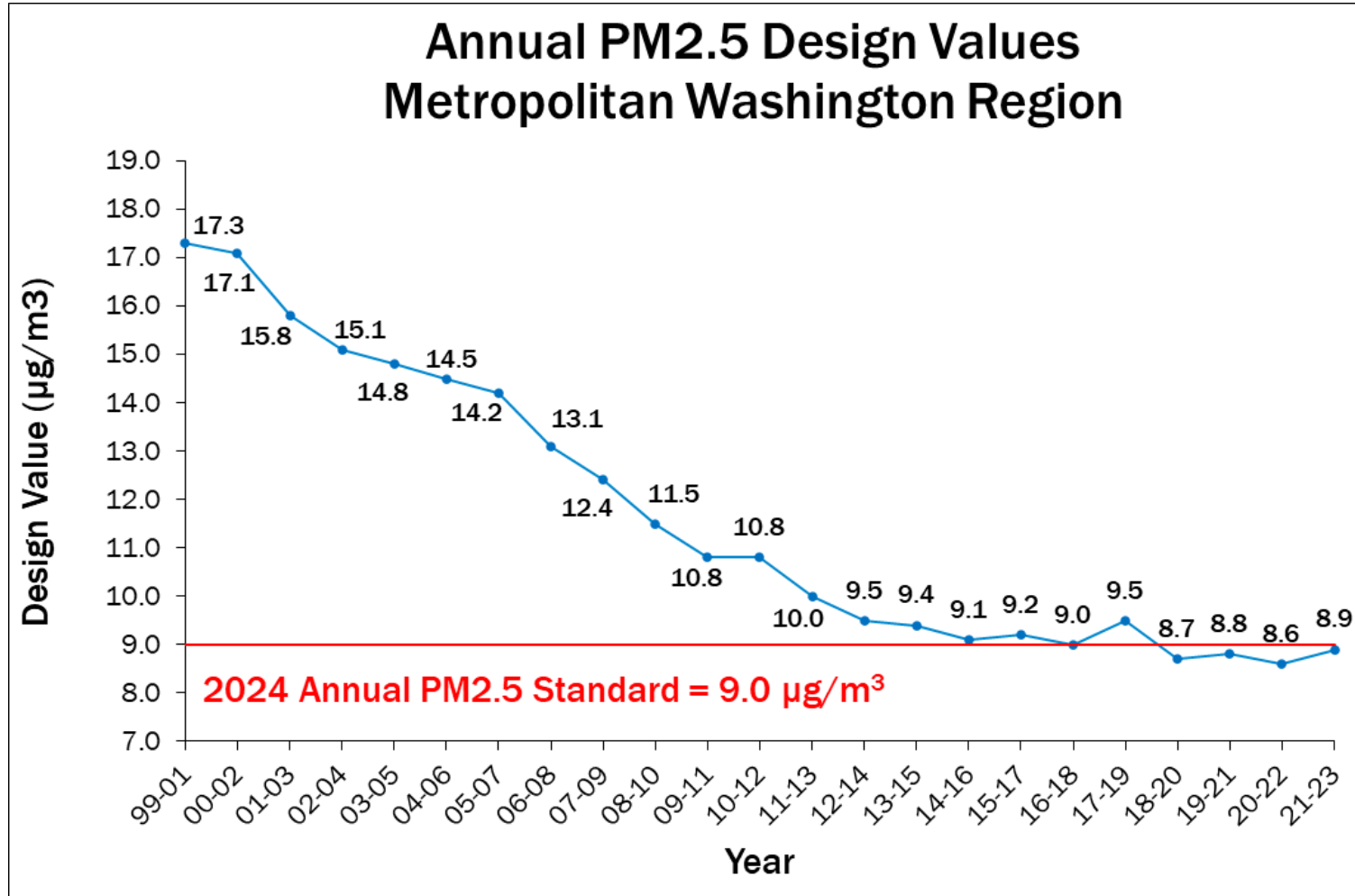
# PM2.5 Exceedance Trend



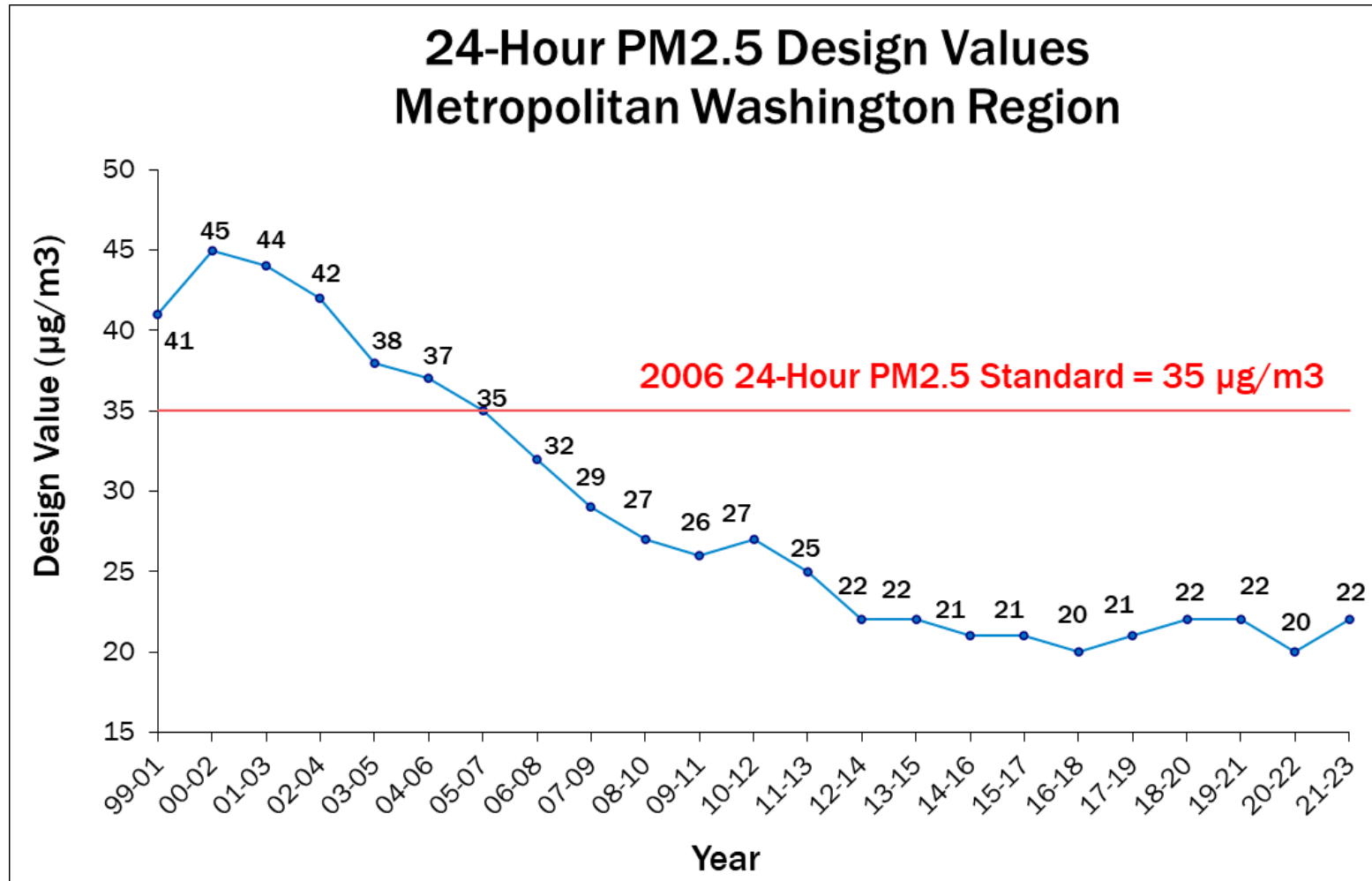
\* 2024 Data is preliminary.



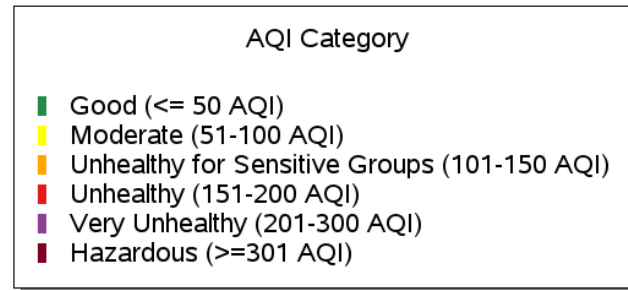
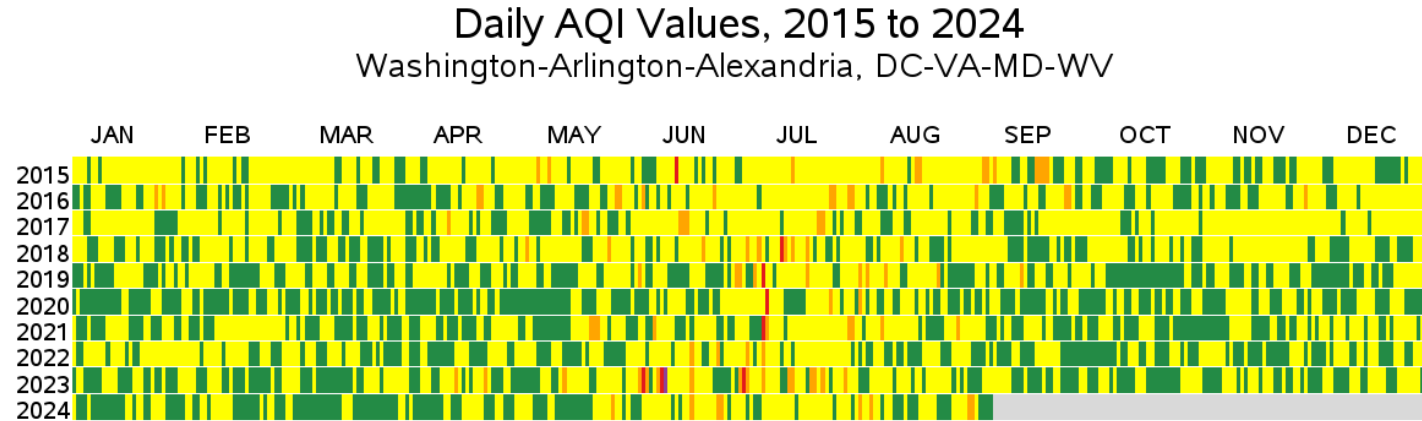
# Annual PM2.5 Design Value Trend



# 24-Hour PM2.5 Design Value Trend



# AQI Value Trends

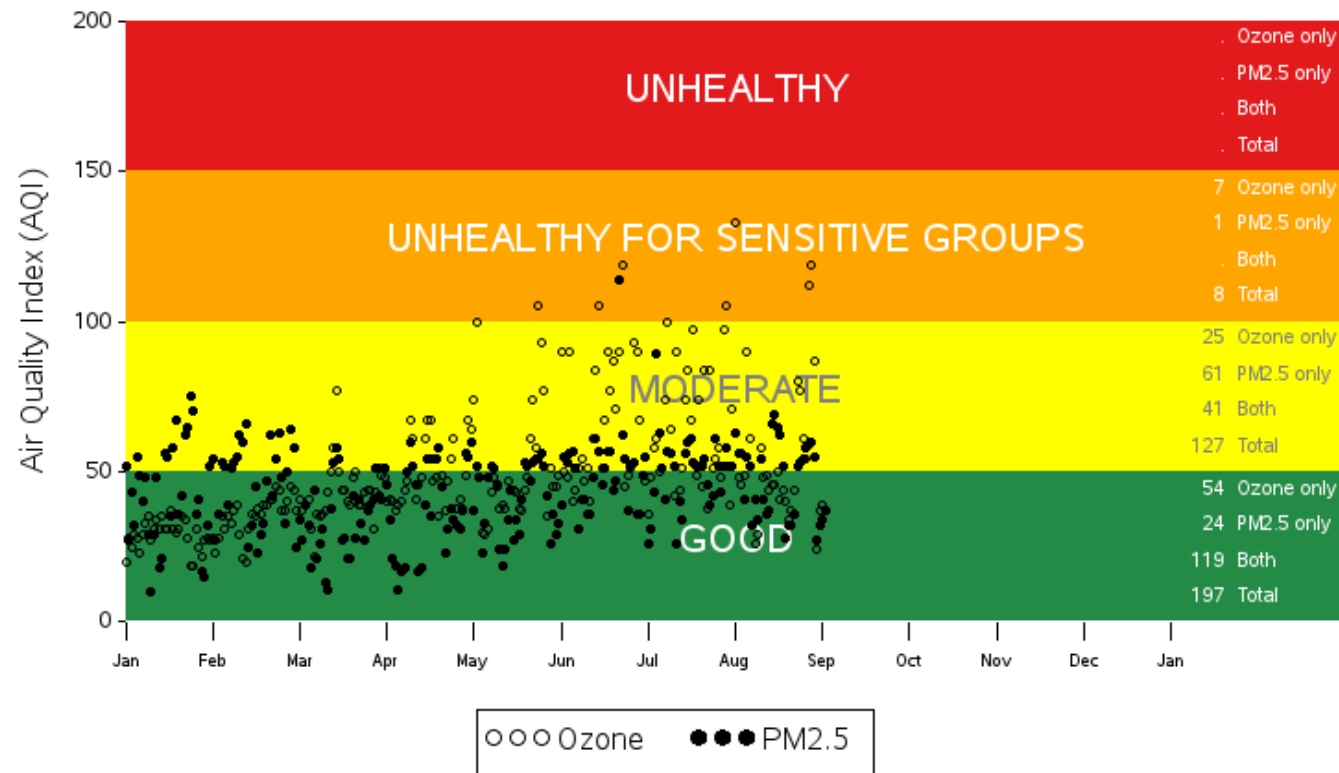


Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>  
Generated: September 3, 2024

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



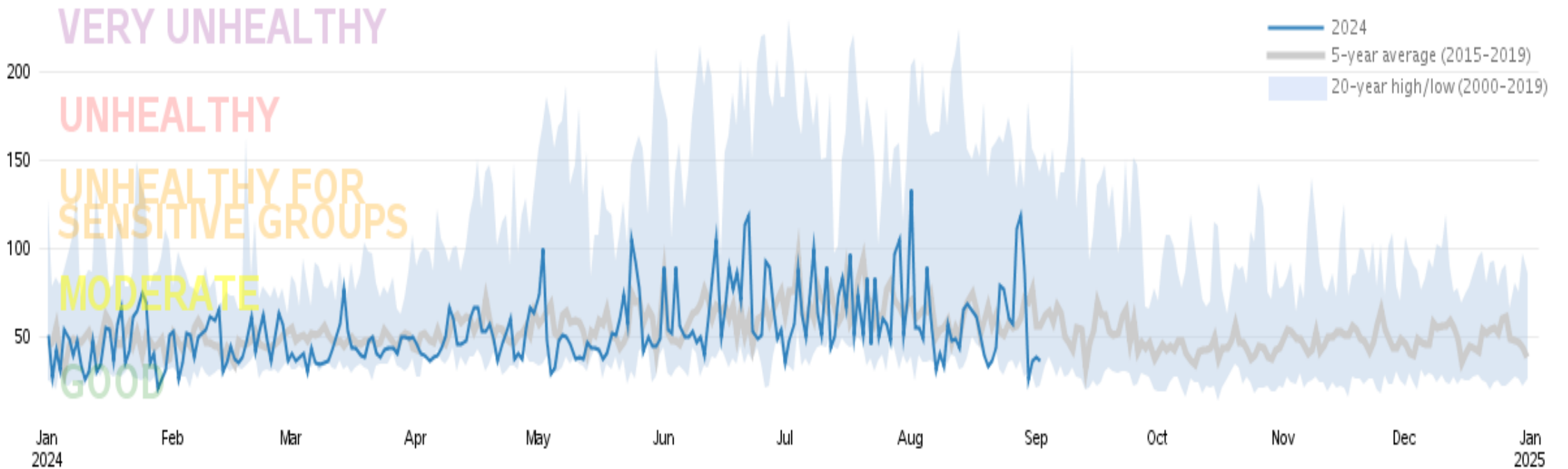
Source: U.S. EPA AirData <<https://www.epa.gov/air-data>>  
Generated: September 3, 2024



# 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: September 3, 2024

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

# Minimum 4<sup>th</sup> High Ozone in 2025 Needed to Exceed 2015 Ozone NAAQS

Monitor	Draft 2022-24 Design Value (ppb)*	4 <sup>th</sup> High Ozone (ppb)
McMillan (DC)	69 (Excludes 6.29.23 EE data)	72
Prince George's Equestrian Center (MD)	68	72
Beltsville (MD)	68	73
Arlington (VA)	67	71

\* Based on draft data as of September 3, 2024.

## Sunil Kumar

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