OZONE SEASON SUMMARY 2022

Sunil Kumar
Principal Environmental Engineer

MWAQC
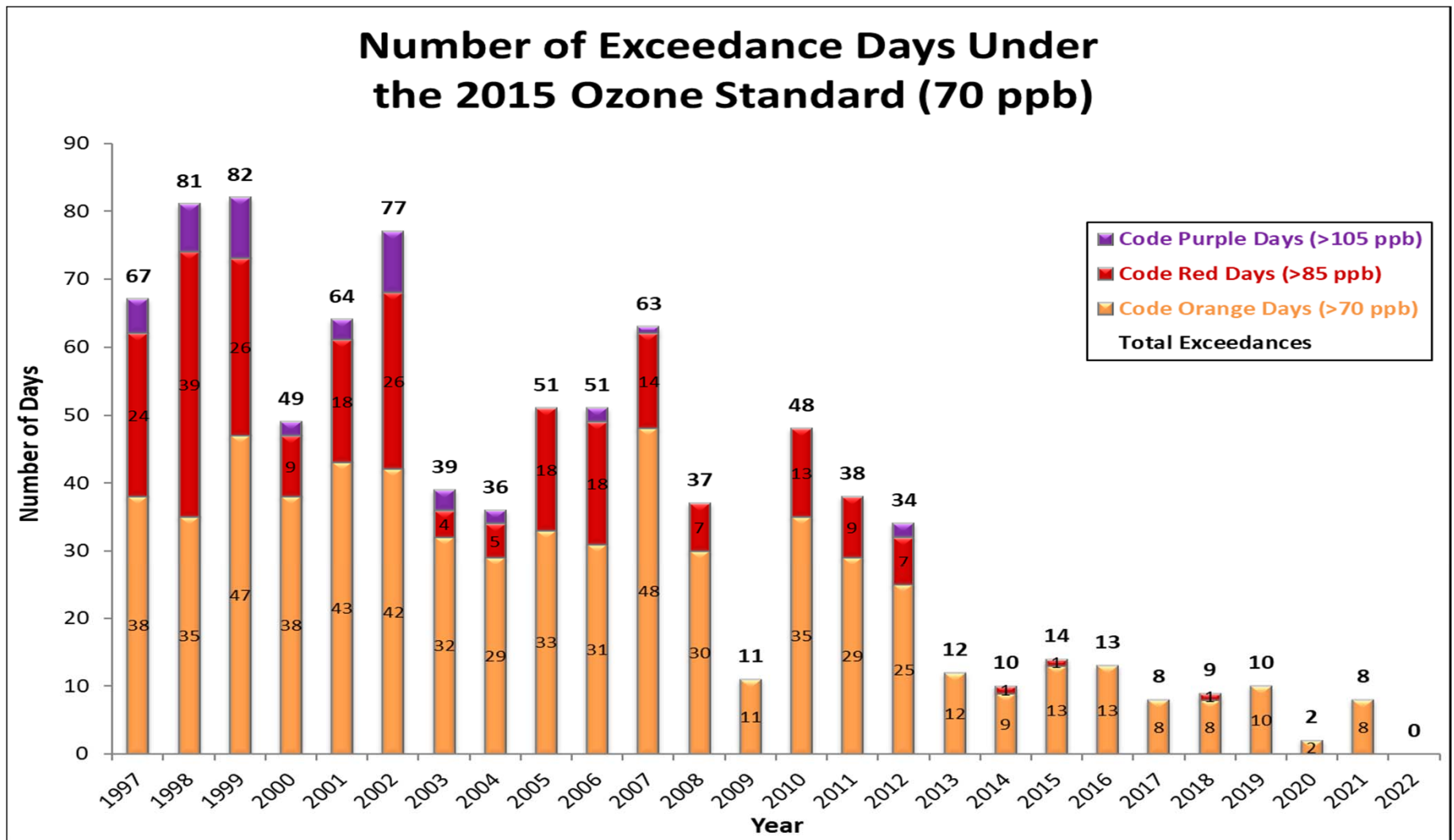**May 25, 2022**

Metropolitan Washington
Council of Governments

Peak 8-Hour Average Ozone Levels (ppb)

March 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	01	02	03	04	05
		47	47	46	44	48
06	07	08	09	10	11	12
43	38	46	43	43	47	46
13	14	15	16	17	18	19
44	52	57	58	43	52	44
20	21	22	23	24	25	26
42	53	55	43	26	47	42
27	28	29	30	31		
39	44	46	51	46		

April 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	01	02
					42	49
03	04	05	06	07	08	09
47	48	39	41	39	49	39
10	11	12	13	14	15	16
42	46	51	57	46	59	57
17	18	19	20	21	22	23
44	32	39	48	50	61	60
24	25	26	27	28	29	30
64	47	39	47	46	57	56

May 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01	02	03	04	05	06	07
						45
08	09	10	11	12	13	14
49	62	63	53	39	24	29
15	16	17	18	19	20	21
43						
22	23	24	25	26	27	28
29	30	31				

13 Code Yellow Days, rest all Code Green Days

Analysis is based on draft data as of May 16, 2022.

Metropolitan Washington
Council of Governments
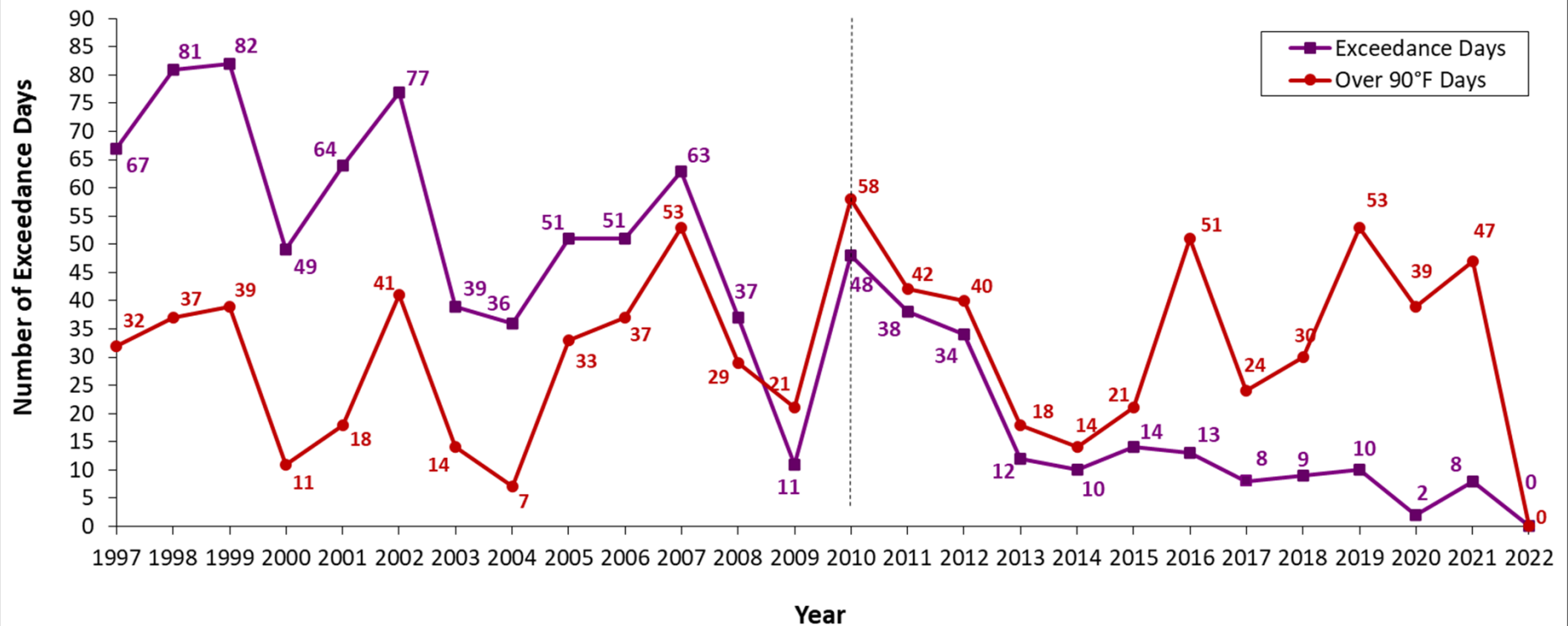
Ozone Exceedance Trend

2022 data is draft and incomplete as of May 16, 2022.

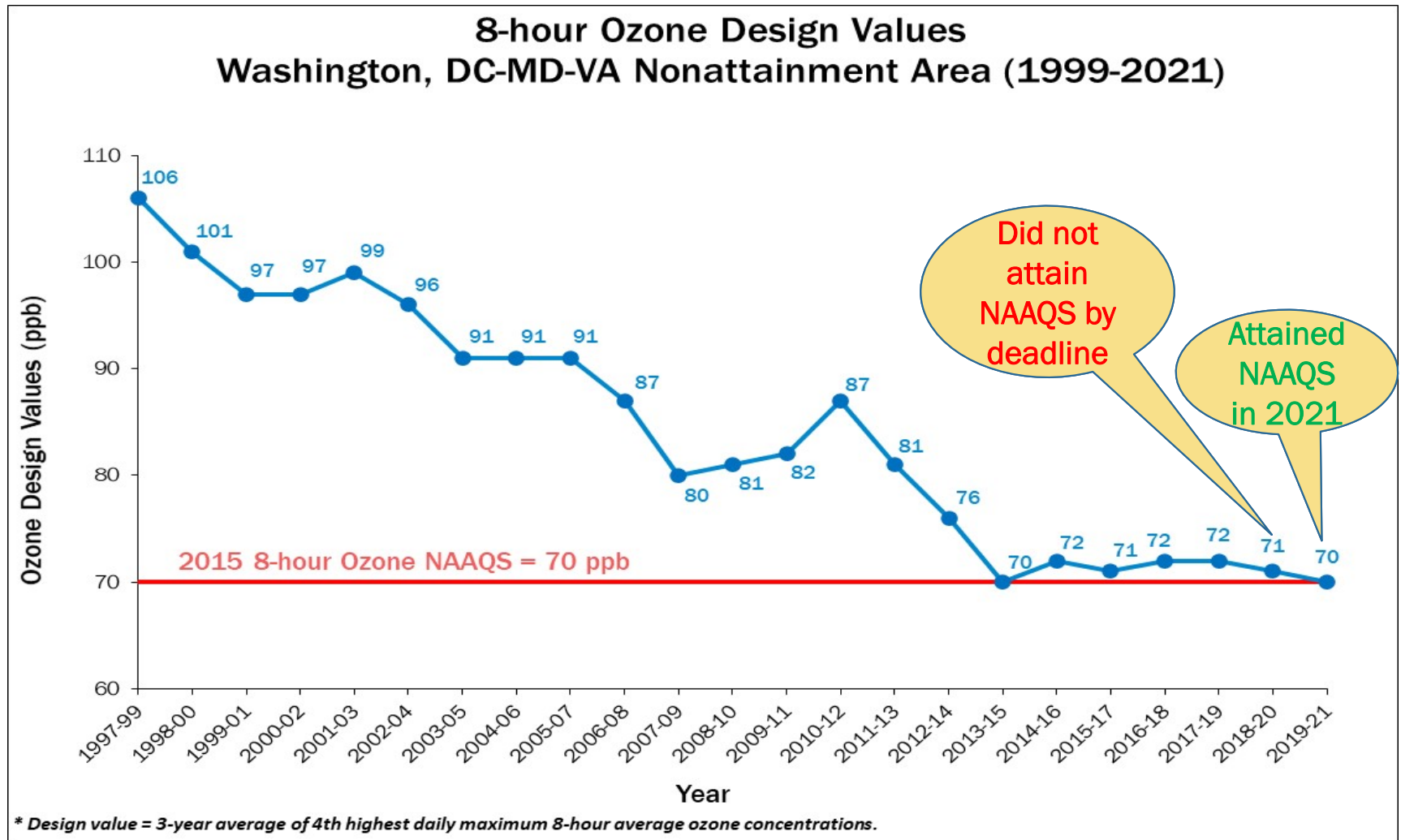# Ozone & Temperature Trend

Over 90°F Days (Dulles) and 8-hour Ozone Exceedance Days (2015 std)

Emissions have been declining over the years, resulting in fewer number of exceedance days.

2021 data is draft and incomplete as of May 16, 2022.

Ozone Design Value Trend

2019-21 data is not official as of May 16, 2022.

Why Fewer Exceedance Days Now ?

Emission Control Programs

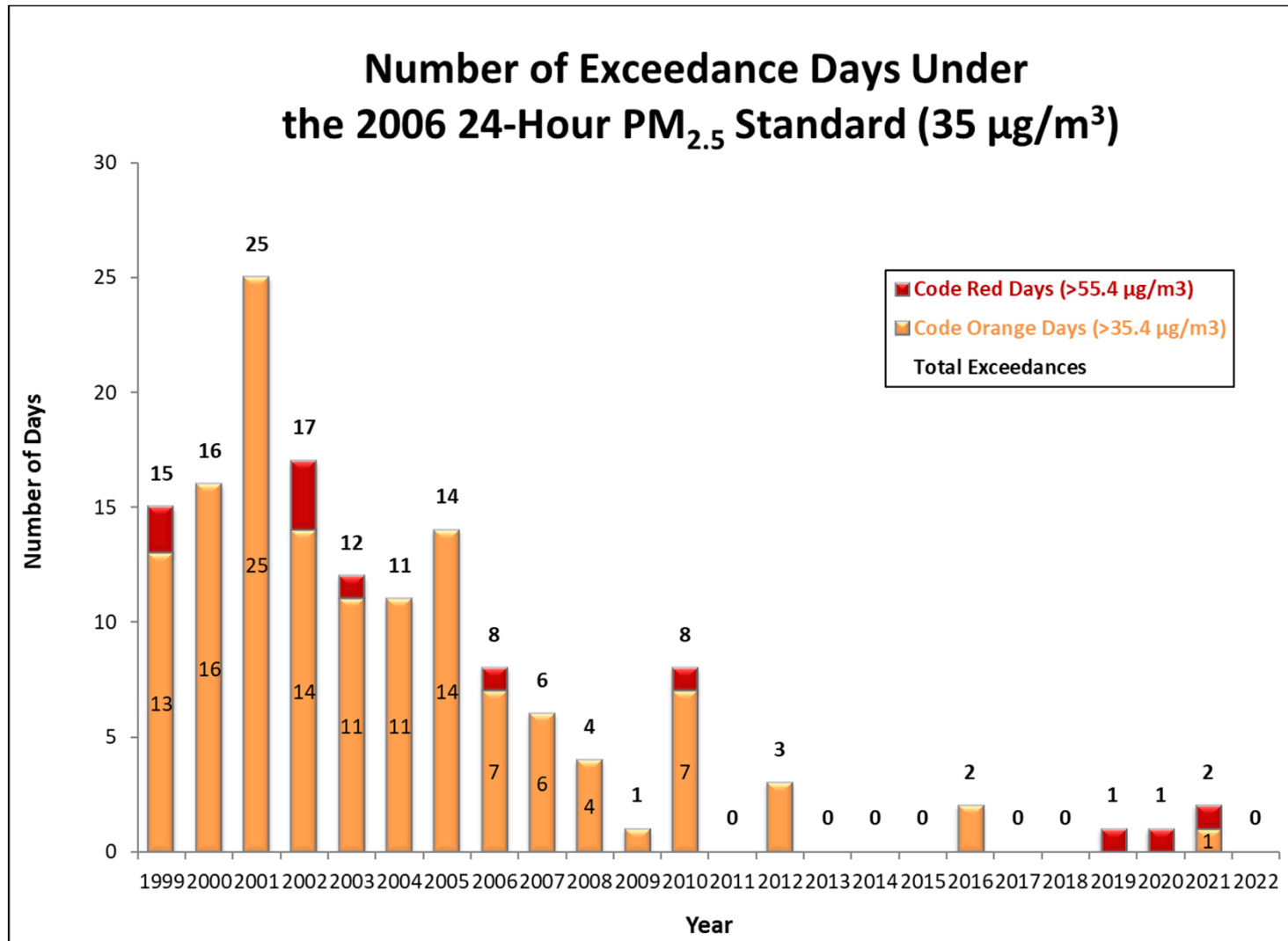| Federal	State	Local
Acid Rain Program (1996/2000)	Vehicle Inspection & Maintenance Programs	**Renewable Energy Programs** Regional Wind Power Purchase Program Clean Energy Rewards Program Renewable Portfolio Standards
Tier 2 (LD Vehicle) Rule (2004)	Maryland Healthy Air Act (2009/2012)	**Energy Efficiency 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 (µg/m³)

March 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	01	02	03	04	05
		11.2	10.6	6.3	9.9	10.0
06	07	08	09	10	11	12
16.2	9.3	7.5	6.6	12.3	12.3	9.1
13	14	15	16	17	18	19
9.2	9.0	10.1	13.1	17.5	13.3	9.2
20	21	22	23	24	25	26
4.0	7.5	11.5	7.6	11.7	9.3	5.2
27	28	29	30	31		
5.8	7.1	8.8	11.3	10.8		

April 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	01	02
					6.4	7.1
03	04	05	06	07	08	09
8.1	11.8	11.4	4.9	5.4	6.9	4.6
10	11	12	13	14	15	16
5.4	8.1	6.5	12.8	9.4	6.2	8.0
17	18	19	20	21	22	23
6.7	5.7	6.2	6.2	7.8	9.5	10.4
24	25	26	27	28	29	30
11.4	12.3	12.0	8.2	5.6	7.5	9.1

May 2022

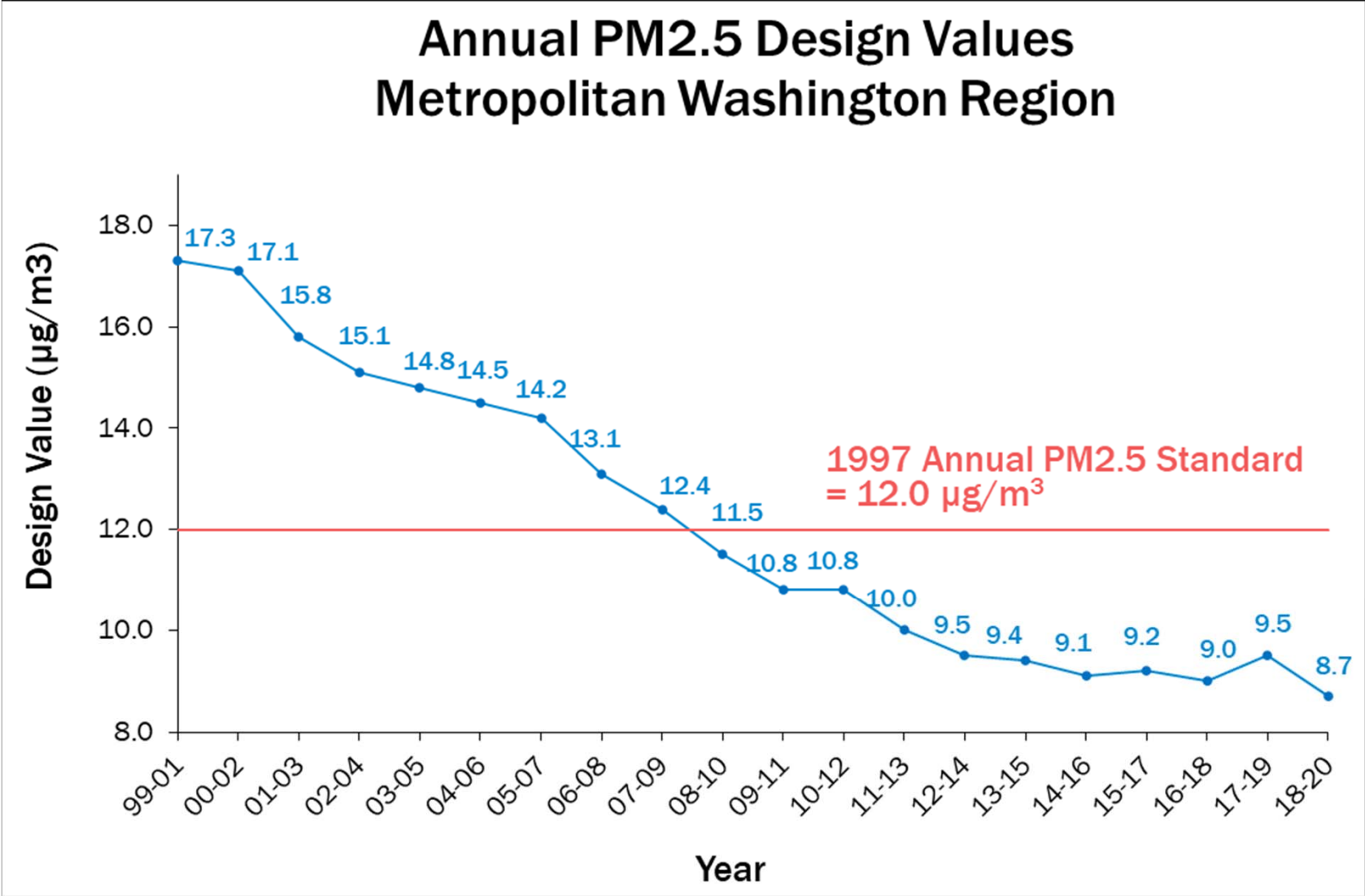| Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01	02	03	04	05	06	07
12.5	12.4	14.2	10.3	7.5	6.6	4.0
08	09	10	11	12	13	14
7.3	8.3	8.1	10.5	8.2	6.7	5.8
15	16	17	18	19	20	21
6.8						
22	23	24	25	26	27	28
29	30	31				

11 Code Yellow Days, rest all Code Green Days

Analysis is based on draft data as of May 16, 2022.

PM2.5 Exceedance Trend

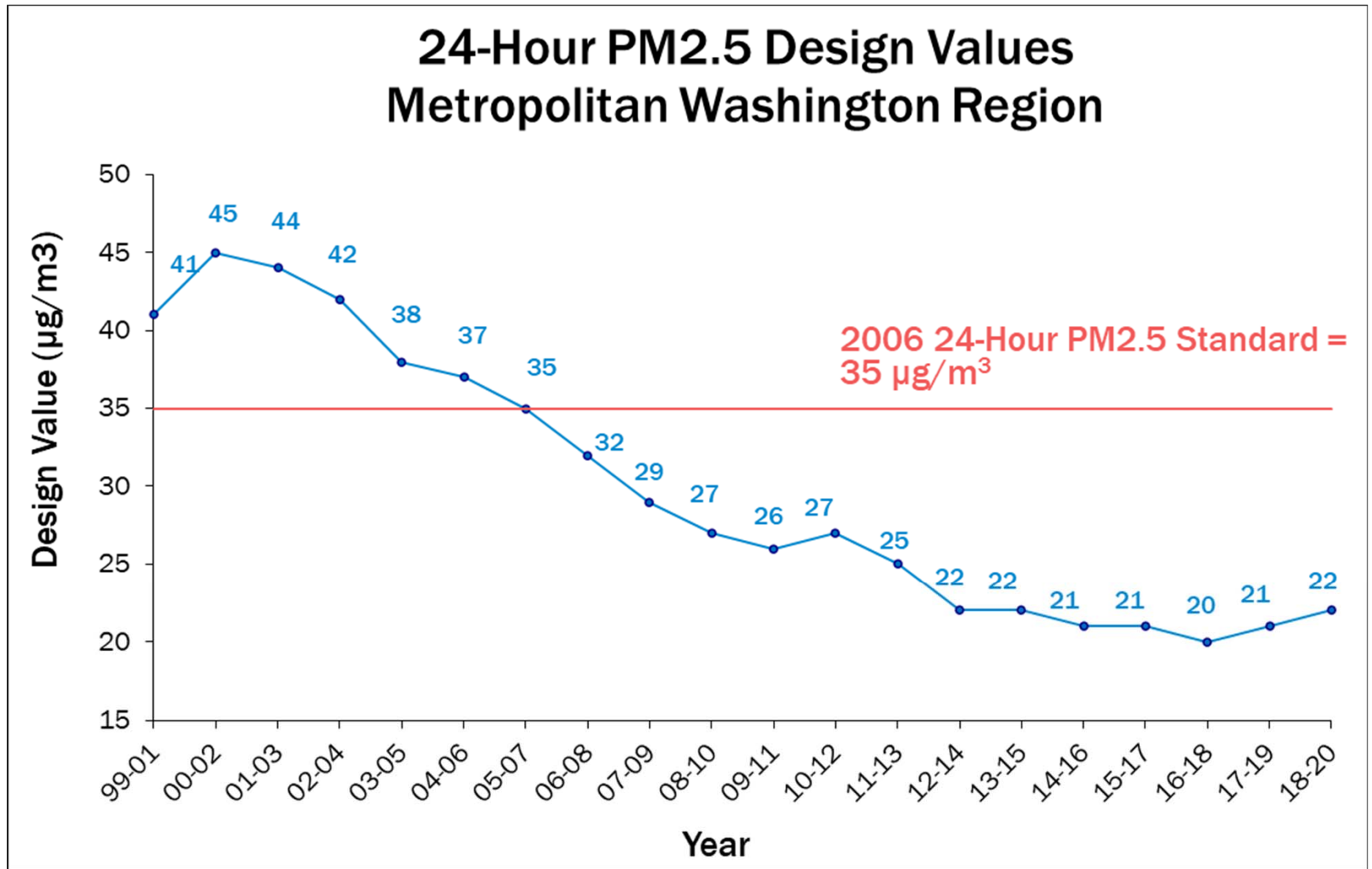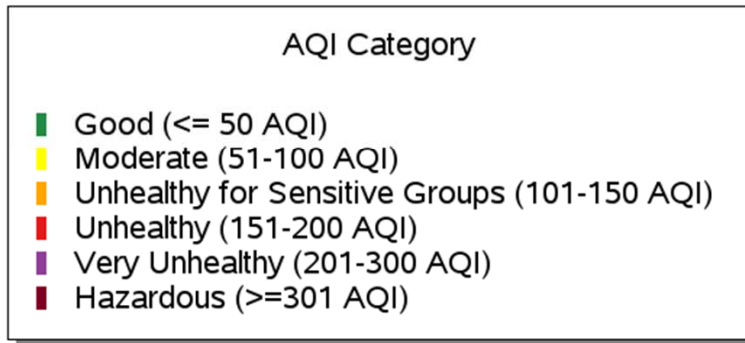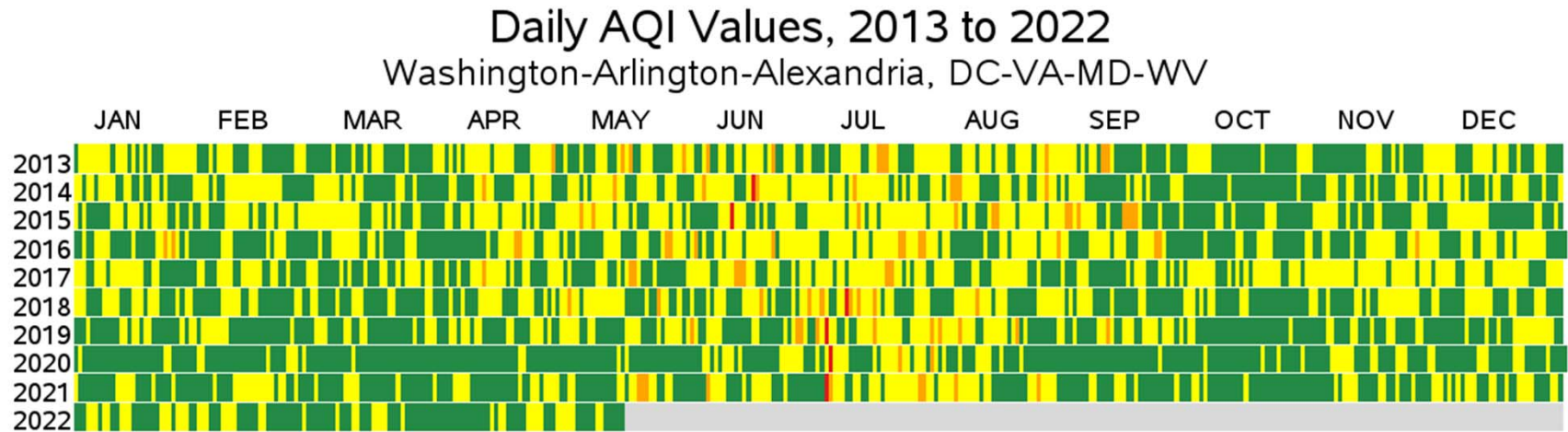2022 data is draft and incomplete as of May 16, 2022.

Annual PM2.5 Design Value Trend

Annual PM2.5 Design Values
Metropolitan Washington Region

1997 Annual PM2.5 Standard = 12.0 µg/m^3

24-Hour PM2.5 Design Value Trend

24-Hour PM2.5 Design Values
Metropolitan Washington Region

2006 24-Hour PM2.5 Standard = 35 µg/m³

AQI Value Trends

Daily AQI Values, 2013 to 2022
Washington-Arlington-Alexandria, DC-VA-MD-WV

AQI Category

- ■ Good (<= 50 AQI)
- ■ Moderate (51-100 AQI)
- ■ Unhealthy for Sensitive Groups (101-150 AQI)
- ■ Unhealthy (151-200 AQI)
- ■ Very Unhealthy (201-300 AQI)
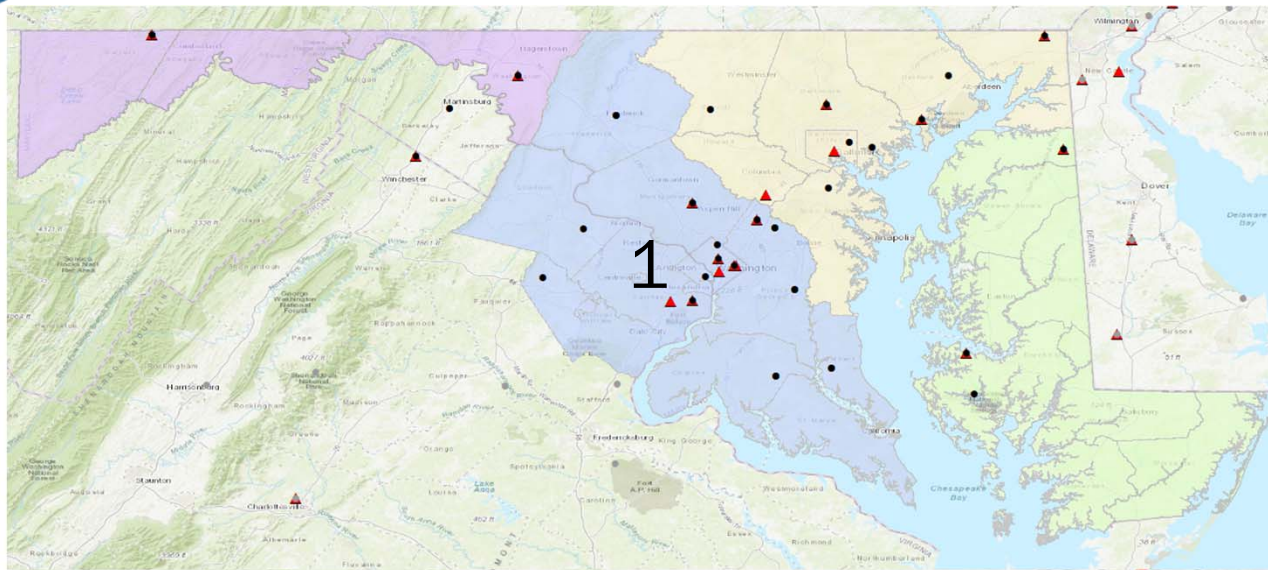- ■ Hazardous (>=301 AQI)

Source: U.S. EPA AirData <https://www.epa.gov/air-data>
Generated: May 16, 2022

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

Changes to Air Quality Forecast Regions

- Forecast regions have been revised to provide the public with more localized information.

- According to data provided by MDE, these changes better reflect local conditions and provide more accurate forecasts.

- People can tailor email notifications to receive forecasts and alerts for each region through EPA's Enviroflash. http://www.enviroflash.info/

- Outreach to the public and media will occur to explain proposed changes such as, how they can receive forecast emails and alerts and how to interpret multiple forecasts in the region.
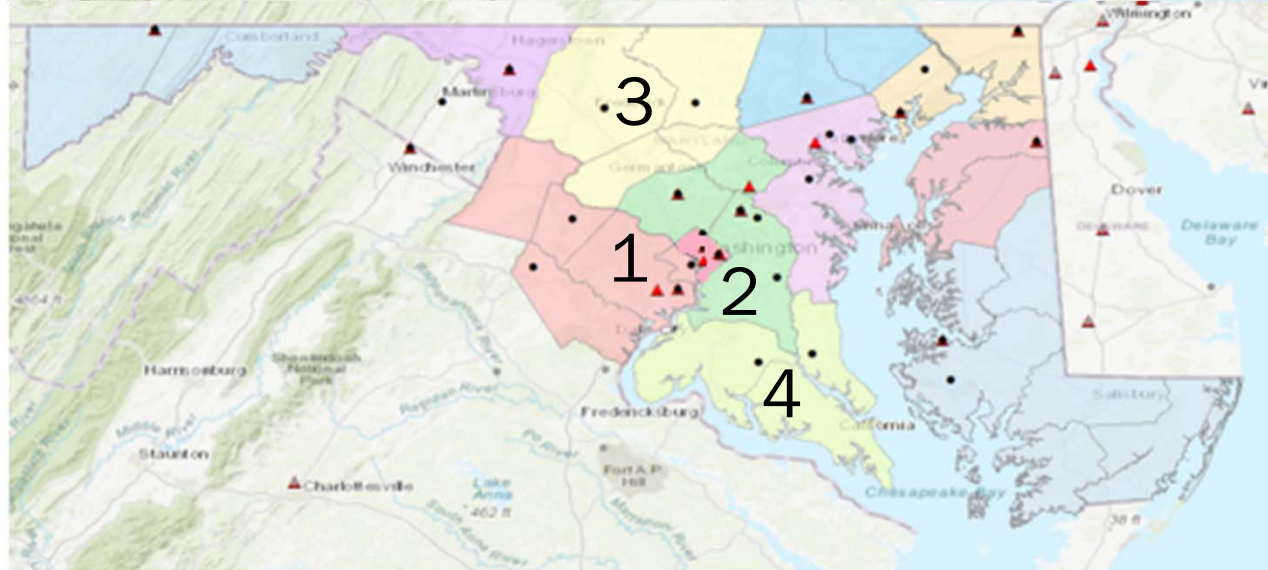
Changes to Air Quality Forecast Regions

Before
4 Forecast regions

Washington region was 1 single region (Blue)

After
11 Forecast regions

Washington region now divided into 4 regions

1. NoVA/District - Peach
2. Suburban DC- Green
3. Piedmont - Yellow
4. S. Maryland- Yellow-green

Metropolitan Washington
Council of Governments