2015 OZONE NAAQS SIP PLANNING

Sunil Kumar Principal Environmental Engineer

ACPAC May 17, 2021



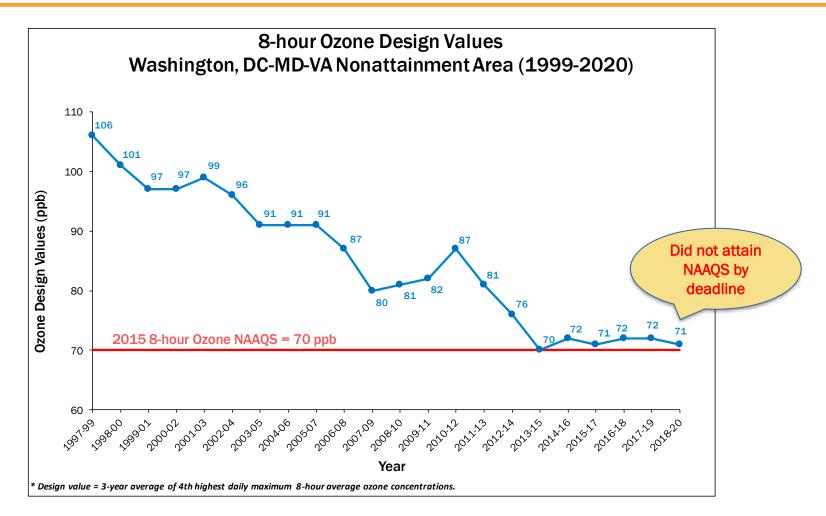


INTRODUCTION

- Washington region is currently classified as a Marginal nonattainment area for the 2015 ozone standard (70 part per billion, ppb). Being a Marginal NAA, the region submitted a BY emissions inventory and was not required to submit an attainment plan.
- The deadline for attaining the above standard is August 3, 2021. Since this date is in the middle of the ozone season 2021, the attainment needs to be based on data for the full ozone season periods of 2018 through 2020.
- In order to attain, the region's design value needed to be at 70 ppb or lower. However, this value was 71 ppb based on the 2018-2020 data. This means the region did not attain the standard by the deadline.
- EPA is required to reclassify the region the region's attainment status by February 3, 2022. EPA could reclassify the region as a Moderate nonattainment area based on the 2018-2020 data.
- State air agencies have agreed to proactively begin working on an attainment plan for the above standard as would be required of a Moderate nonattainment area.
- COG staff developed a draft schedule to develop Reasonable Further Progress (RFP) and Attainment plans in coordination with states.



Ozone Design Value Trend



2018-2020 design value data is draft as of May 4, 2021.



Metropolitan Washington Council of Governments

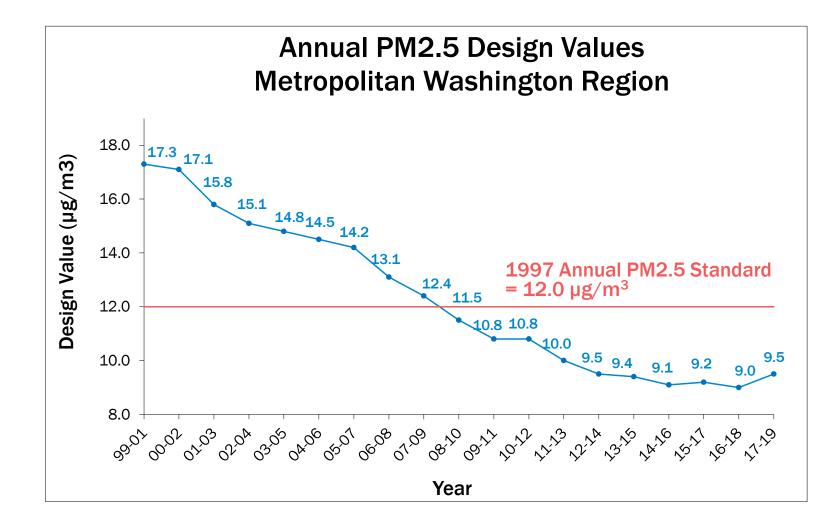
Why Fewer Exceedance Days Now ?

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

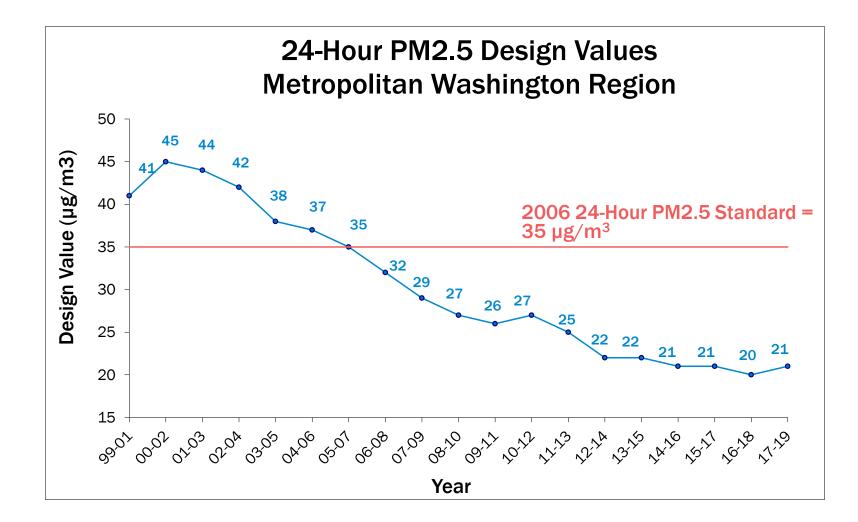


Annual PM2.5 Design Value Trend



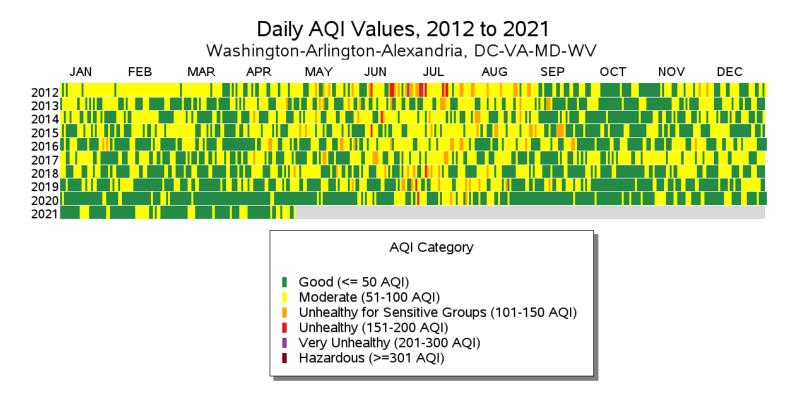


24-Hour PM2.5 Design Value Trend





AQI Value Trends

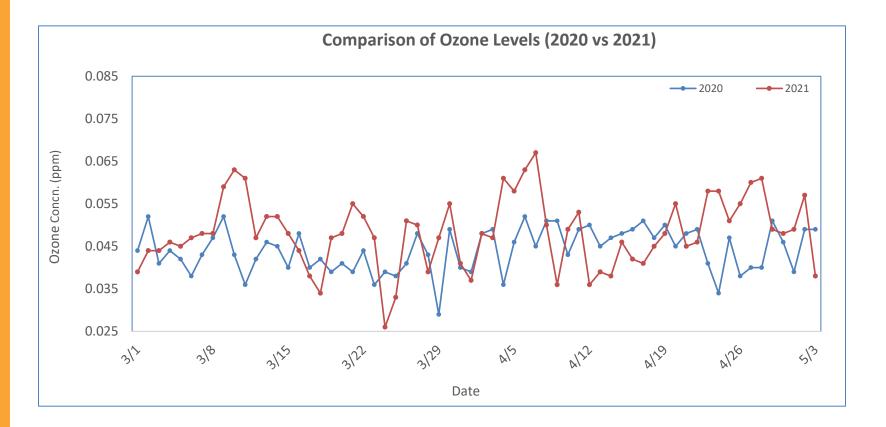


Source: U.S. EPA AirData <https://www.epa.gov/air-data> Generated: May 4, 2021

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



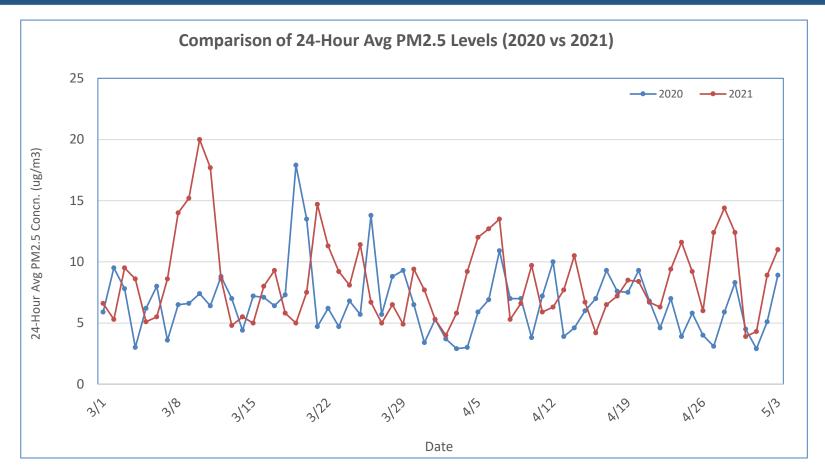
OZONE LEVELS - 2020 Vs 2021



• Draft 2021 ozone levels mostly higher. Warmer and drier than normal weather might be partly responsible.



PM2.5 LEVELS - 2020 Vs 2021



• Draft 2021 PM2.5 levels mostly higher. Warmer and drier than normal weather might be partly responsible.



Metropolitan Washington Council of Governments

WEATHER & AIR QUALITY

- Weather plays an important role in determining air quality besides emission.
- March 2020 Warmer and drier than normal.
- April 2020 Warmer and drier than normal.

Source: https://w2.weather.gov/climate/index.php?wfo=lwx



Ozone Data & Attainment Status

Monitor	County, State	Ozone Concentration (ppb)					
		Draft 2018-20 Design Value	4 th Highest Daily Max 8-Hr Avg Ozone (2019)	4 th Highest Daily Max 8-Hr Avg Ozone (2020)	4 th Highest Daily Max 8-Hr Avg Ozone (2021)	Max 4 th Highest Daily Max 8-Hr Avg Ozone allowed in order to attain (71 ppb) in 2021	
Beltsville	Prince George's, MD	71	75	65	59	72	
McMillian Ncore	District of Columbia	69	71	63	58	78	
HU- Beltsville	Prince George's, MD	68	71	64	57	77	
Takoma	District of Columbia	67	67	63	56	82	
Arlington	Arlington, VA	66	68	62	56	82	
PG Equestrian	Prince George's, MD	65	65	60	59	87	
Franconia	Fairfax, VA	64	70	57	57	85	
Frederick	Fredrick, MD	65	65	63	58	84	
Rockville	Montgomery, MD	63	62	59	60	91	
S. Maryland	Charles, MD	60	61	52	57	99	
Ashburn	Loudoun, VA	61	60	60	56	92	
Long Park	Prince William, VA	60	60	57	57	95	
Calvert	Calvert, MD	59	58	54	56	100	
River Terrace	District of Columbia	55	62	54	50	96	

2021 data is draft and incomplete as of May 4, 2021.



CONCLUSIONS

- Ozone and PM2.5 levels were overall higher in March and April of 2021 compared to same months in 2020.
- Warmer and drier than normal weather might have contributed towards higher pollutant levels this year.
- Role of emission from different sources is planned for investigation.
- Ozone data will be closely monitored this year to see if the region is able to attain the 2015 ozone standard (70 ppb) based on the 2019-2021 data.

