

Standard Air Quality Forecast Procedures Baltimore-Washington Region Ozone Season - 2015

This document specifies the standard operating procedures for issuing and displaying air quality forecasts.

Air Quality Forecast Calls

Dates: April 15 through September 25, 2015

Times: Daily at 2:30pm

Call Originator: Weekdays - COG
Weekends – MDE Forecasters

Developing and Issuing Air Quality Forecasts

Air quality forecasts will be developed for the next three days based on the 8-hour averaged ozone and the 24-hour averaged fine particulate matter (PM_{2.5}) concentrations. Air Quality Index (AQI) values and the corresponding AQI colors will be developed based on the cut-points shown in the Table 1 below. This is consistent with the EPA’s Air Quality Index (AQI) rule.

Table 1: Ozone and Particulate Matter Cut-Points

8-Hr O ₃ (ppb) ^a	24-Hour PM _{2.5} (µg/m ³) ^a	AQI Color	AQI Range	Health Descriptor
0 - 59	0 – 12.0	GREEN	0- 50	Good
60 - 75	12.1 - 35.4	YELLOW	51 - 100	Moderate
76 - 95	35.5 – 55.4	ORANGE	101 - 150	Unhealthy for Sensitive Groups
96 - 115	55.5 – 150.4	RED	151 - 200	Unhealthy
116 - 374	150.5 – 250.4	PURPLE	201 - 300	Very Unhealthy

^a The 8-hour ozone and the 24-hour PM_{2.5} data ranges as defined in EPA’s AQI rule are to be used for preparing the 8-hour ozone and the 24-hour PM_{2.5} forecasts for the next three days and reporting the previous day’s maximum AQI value and its color code. The 8-hour ozone cut-points are based on the 2008 ozone standard. The 24-hour PM_{2.5} cut-points are based on the 2006 24-hour PM_{2.5} standard and the 2012 annual PM_{2.5} standard.

Table 2 below identifies organizations responsible for developing ozone and PM_{2.5} forecasts for the four forecast areas. Consensus ozone and PM_{2.5} forecasts will be developed by averaging the forecasted ozone and PM_{2.5} concentrations and AQIs respectively provided by the three organizations. The AQI values will be calculated for the above two pollutants. Air quality forecasts will be issued

for the pollutant with the higher AQI value, which will be called the lead pollutant. Forecasts for the next three days will be issued mentioning the lead pollutants by name, and the associated AQI colors and AQI values.

Table 2: Organizations Responsible for Weekday Forecasts

	Ozone				PM2.5			
	Washington	Baltimore	Western Maryland	Eastern Shore	Washington	Baltimore	Western Maryland	Eastern Shore
COG	x							
MDE	x	x	x	x	x	x	x	x
VDEQ			x				x	

* MDE staff will prepare and disseminate weekend forecasts for the four areas.

Submitting Forecasts

COG staff will post forecasts for the Washington region to the EPA's AIRNowTech web-site. VDEQ staff will post forecasts for the Northern Virginia (Washington) region. The MDE staff will post forecasts for the Baltimore region, Western Maryland and Eastern Shore. On weekends, the COG and VDEQ staff will receive an email from MDE containing the forecasts by 2:30 PM and will handle necessary reporting and posting of the ozone and PM2.5 forecasts for the Washington region. The MDE staff will handle necessary reporting and posting of the ozone and PM2.5 forecasts for the other three regions.

Taking Additional Steps on Forecasted Code Orange and Worse Days

On Code Orange and above days, the health messages will be enhanced to alert affected populations.

When a Code Orange, Red, or Purple (AQI >= 101) is forecasted for the next day (Day 1), "Action Day" will also be announced for the next day through the AirNowTech forecast submission web-site. This is done in the above web-site by checking the "Action Day" box just below the "Tomorrow" AQI submission box.

Forecast Display on Web-Sites

The lead pollutant and the corresponding AQI color will be listed on the COG web-site - <http://www.mwcog.org/environment/air/forecast/>, the MDE's web site - <http://www.mde.state.md.us/programs/Air/AirQualityMonitoring/Pages/index.aspx>, the VDEQ web-site - http://vadeq.tx.sutron.com/cgi-bin/air_quality_forecast.pl, and the Clean Air Partners web-site - <http://www.cleanairpartners.net/>. EPA's AIRNow web site will have both pollutants and color codes.

Reporting Forecasts

Forecasts will be disseminated through the phone hotline and several websites.

Washington DC Region

- COG staff will update the COG Air Quality Hotline daily by 3 pm.
- COG Staff will update the following websites daily by 3 pm:
 - EPA AIRNowTech: Next three days.
 - COG Air Website: Next three days automatically updated with the forecast entered through AIRNowTech.
 - Clean Air Partners: Next three days automatically updated with the forecast entered through AIRNowTech.

Baltimore, Western Maryland, and Eastern Shore Regions

- MDE staff will update the MDE Air Quality Hotline daily by 3 pm.
- MDE staff will update the following websites daily by 3 pm:
 - EPA AIRNowTech: Next three days.
 - MDE web site: Next three days.
 - Clean Air Partners: Next three days automatically updated with the forecast entered through AIRNowTech.

AirAlerts: Real-Time Notifications

Air Quality alerts will be sent through email to participants that request notifications through the Clean Air Partners web site. Participants will be able to customize notifications, including region (Metropolitan Washington, Metropolitan Baltimore, Western MD, and Eastern Shore) and alert threshold, Code Orange or Red.

National Weather Service Air Quality Alerts

The National Weather Service (NWS) will automatically issue Air Quality Alerts (AQA) and Air Quality Index Statements for forecast areas in Maryland, Virginia, and Washington D.C. based upon the forecasts submitted through AIRNow-Tech. Air Quality Index Statements are issued daily with a description of the next-day forecast. AQAs are only issued when the next-day forecast is Code Orange or greater and are displayed on the NWS Hazards Map. These forms of dissemination through the NWS allow our forecasts to reach anywhere between 5 – 60 million users per day depending on the level of weather activity. More information can be found at www.nws.noaa.gov/directives/010/010.htm, NWS Directive 10-519.

Reporting Previous Day's Air Quality Data

Previous day's peak AQI value and AQI color code will be automatically posted on the COG (www.mwcog.org), Clean Air Partners (www.cleanairpartners.net) and MDE web sites for ozone and PM_{2.5}. Peak AQI is based on the 8-hour ozone concentrations and the 24-hour PM_{2.5} concentrations. Previous day's data is generated by EPA AirNowTech.

Contact Information for Forecasters

Joel Dreessen
MDE
Phone: 410-537-3296
FAX: 410-537-4243
E-mail: joel.dreessen@maryland.gov

Mike Woodman
MDE
Phone: 410-537-3229
FAX: 410-537-4243
E-mail: michael.woodman@maryland.gov

Amy Huff
Penn State University
Phone : 814-865-2951
FAX :
E-mail : psaqfo@psu.edu

Bill Ryan
Penn State University
Phone : 814-865-9025
FAX :
E-mail : psaqfo@psu.edu

Kristen Stumpf
VA DEQ
Phone: 804-698-4414
FAX: 804-698-4510
E-mail: Kristen.Stumpf@deq.virginia.gov

Dan Salkovitz
VA DEQ
Phone: 804-698-4404
FAX: 804-698-4510
E-mail: daniel.salkovitz@deq.virginia.gov

Mike Kiss
VA DEQ
Phone: 804-698-4460
FAX: 804-698-4510
E-mail: michael.kiss@deq.virginia.gov

Jen Desimone
MWCOG
Phone: 202-962-3360
FAX: 202-962-3203
E-mail: jdesimone@mwkog.org

Sunil Kumar
MWCOG
Phone: 202-962-3244
FAX: 202-962-3203
E-mail: skumar@mwkog.org