

Standard Air Quality Forecast Procedures Baltimore-Washington Region Ozone Season - 2014

Developing Air Quality Forecasts

Air quality forecasts will be issued for the next three days based on 8-hour averaged ozone and 24-hour averaged fine particulate matter (PM_{2.5}). This is consistent with the EPA's Air Quality Index (AQI) rule. This document specifies the standard operating procedures for issuing air quality forecasts.

Air Quality Forecast Calls

Dates: April 14 through September 26, 2014

Times: Daily at 2:30pm

Call Originator: Weekdays - COG
Weekends – MDE Forecasters

Pollutant and AQI color will be listed on the <http://www.mwcog.org/environment/air/forecast/> and MDE's web site. EPA's AIRNow web site will have both pollutants and color codes.

The next three days forecasts will be prepared for both 8-hour ozone and 24-hour PM_{2.5} as follows:

- Forecasts for day 1, 2, and 3 will be issued mentioning the lead pollutant by name, and the associated AQI color and AQI value.

COG and VA DEQ staff will independently prepare and provide ozone forecasts for the Washington DC-MD-VA metropolitan area and Western Maryland region respectively. MDE staff will prepare and provide both ozone and PM_{2.5} forecasts for the Washington DC-MD-VA metropolitan area, Baltimore Region, Western Maryland Region, and the Eastern Shore Region. VA DEQ staff will independently prepare and provide PM_{2.5} forecasts for the Western Maryland region. COG staff will use the consensus ozone forecasts and incorporate the Washington, DC-MD-VA PM_{2.5} forecasts when issuing air quality forecasts for the Washington DC-MD-VA metropolitan area.

Ozone and PM_{2.5} concentration cut-points are given in Table 1. EPA published in the federal register revised PM_{2.5} cut-points based on the 2013 annual PM_{2.5} standard and the 2006 24-hour PM_{2.5} standard on January 15, 2013. These revised cut-points will be used for calculating AQI values and color codes for PM_{2.5}.

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 2013 annual PM_{2.5} standard.

MDE staff will prepare weekend forecasts. The MDE staff will post the Baltimore region, Western Maryland and Eastern Shore forecasts to the EPA's AIRNowTech web site. On weekends the COG staff will receive an email from MDE containing the forecast by 2:30 PM and will handle necessary reporting and posting of the ozone and PM_{2.5} forecast to EPA's AIRNowTech website.

Forecast Criteria

Forecasts are issued based on two pollutants, ozone and fine particulate matter (PM_{2.5}). The AQI value will be calculated for the above two pollutants. The air quality forecast will be issued for the pollutant with the higher AQI value.

Forecasts will be issued using the AQI color code and descriptor. On Code Orange and Red days, the health messages will be enhanced to alert affected populations.

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 day and long range.
 - COG Air Website: Next day and long range automatically updated with the forecast entered through AIRNowTech.
 - Clean Air Partners: Next day and long range 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 day and long range.
 - MDE web site: Next day and long range forecast.
 - Clean Air Partners: Next day and long range 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.