

MEMORANDUM

DATE: December 4, 2008
TO: MWAQC Technical Advisory Committee (TAC)
FROM: Joan Rohlf, Chief Air Quality Planning
SUBJECT: Metro Washington Region: Designation for 2006 24-hour PM2.5 Standard

Background

On October 17, 2006 EPA revised the National Ambient Air Quality Standard (NAAQS) for 24-hour fine particles (PM_{2.5}). The standard became effective on Dec. 18, 2006. The daily (24-hr) standard was reduced to 35 ug/m³

PM 2.5	Annual	Daily
EPA 1997	15 ug/m ³	65 ug/m ³
EPA 2006	15 ug/m ³	35 ug/m ³

Under EPA’s designation process, the states were required to recommend designations for areas by December 18, 2007. If EPA’s designation differs from the state’s recommendation, EPA must give the state 120 days notice prior to the final designation so that the state has an opportunity to comment. EPA is required to designate nonattainment areas by December 18, 2008.

A particular county is said to be in nonattainment for the above standard if the three-year average of the 98th percentile of 24-hour average PM2.5 concentrations measured in that county at any monitor exceeds 35 ug/m³. Additionally, EPA can also designate a particular county as nonattainment if it determines that the county is contributing to the violation of the standard in another area even if its monitors show attainment.

Proposed Designation for the Washington, DC-MD-VA Region, 8/18/08

In August EPA informed the District, VDEQ and MDE that the counties in the Washington region would be designated in attainment for the 2006 24-hour PM2.5 standard. EPA told MDE that Baltimore would be designated nonattainment for the standard. A table of State recommended nonattainment counties and EPA intended nonattainment counties for this standard is shown in Table 4.

EPA also accepted the list of counties and cities requested by Maryland to be part of the Baltimore NAA. These counties were Anne Arundel, Baltimore, Baltimore city, Carroll, Harford, and Howard. EPA’s acceptance of these cities/counties was based on a detailed 9-factor analysis for the Baltimore NAA.

Public Comments

EPA held a comment period, September 1 to October 2, on its proposed designations. The American Lung Association (ALA) submitted a detailed comment letter that argued for designating the entire Washington, DC-MD-VA region nonattainment along with the Baltimore region based on monitor data and emissions from Metropolitan Washington region jurisdictions that contribute to Baltimore's nonattainment.

In response to ALA's comment, EPA intends to add Montgomery County and Prince George's County to the Baltimore nonattainment area for the 2006 24-hour PM_{2.5} standard. EPA notified MDE of their decision in mid-November. When EPA issues its final designation on or before December 18, 2008 it will then propose to add Montgomery County and Prince George's County to the Baltimore nonattainment area, initiating a new 120-day comment period for that proposal.

Basis for Nonattainment Area Boundaries

EPA informed Maryland Department of the Environment (MDE) and COG/DEP staff that this decision is based on the significant contribution from these two counties to the violation of the standard in the Baltimore NAA. In August EPA sent MDE a detailed 9-factor analysis of counties in Maryland. According to EPAs' designation guidance of June 2007:¹

EPA considers the following nine factors in determining whether to include an area in the designated nonattainment area boundary:

- *Emission data*
- *Air quality data*
- *Population density and degree of urbanization*
- *Traffic and commuting patterns*
- *Growth rates and patterns*
- *Meteorology (weather/transport patterns)*
- *Geography/topography*
- *Jurisdictional boundaries (e.g., counties, air districts, metropolitan planning organizations (MPOs))*
- *Level of control of emission sources*

¹ EPA Memorandum, "Area Designations for the Revised 24-Hour Fine Particle National Ambient Air Quality Standard," from Robert J. Meyers to Regional Administrators, June 8, 2007.

Tables 1-3 present data for the jurisdictions in the Washington, DC-MD-VA based on the 9 factors used by EPA.

Table 1 - Air Quality Data (2005-07)

Jurisdiction	24-Hour PM2.5 Design Value (ug/m3)
Montgomery	30
Prince George's	32
Washington, DC	35
Fairfax	34
Loudoun	33
Arlington	32
Alexandria, Prince William, Charles	No Monitor

Source: EPA's Air Trends web-site for Design Values
<http://www.epa.gov/air/airtrends/values.html>

Table 2 - Pollutant Emissions (2005)

Jurisdiction	Direction from Baltimore	Pollutant Emissions (tpy)				
		PM2.5-Pri	SO2	NOx	NH3	VOC
Montgomery	SW	7,031	41,801	26,763	1,090	28,692
Prince George's	SW	6,737	63,981	34,959	1,193	27,826
Charles	SSW	3,583	81,281	17,056	276	6,421
Washington, DC	SW	1,295	3,949	13,375	450	10,689
Fairfax	SW	2,941	3,744	32,489	1,504	36,170
Prince William	SW	1,612	7,415	13,557	582	13,327
Loudoun	SW	1,463	1,037	8,374	644	9,744
Alexandria	SW	1,110	8,990	6,088	152	3,973
Arlington	SW	709	1,054	6,542	238	5,575

Source: 2005 NEI Ver. 1 Tier 1 summaries

Table 3 - VMT (2008)

Jurisdiction	2008 VMT (2007 CLRP) (Typical Ozone Season Day – ‘000s)	VMT Change (%) (2002 – 2008)
Montgomery	24,072	4
Prince George's	24,836	5
Charles	3,369	15
Washington, DC	11,243	4
Fairfax	30,548	7
Prince William	10,703	18
Loudoun	7,226	25
Alexandria	2,528	4
Arlington	5,349	4

Source: 2007 CLRP & 2008-2013 TIP

Table 4 – Nonattainment Counties/Cities in Washington, DC-MD-VA Metropolitan Area (as of 8/18/08)

Nonattainment Counties 8-Hour Ozone Standard (1997)	Nonattainment Counties Annual & 24-Hour PM.25 Standards (1997)	State Recommended Nonattainment Counties 24-Hour PM2.5 Standard (2006)	EPA Intended Nonattainment Counties 24-Hour PM2.5 Standard (2006)
District of Columbia	District of Columbia	District of Columbia	EPA proposed whole Washington, DC-MD-VA MSA to be determined in attainment in its August 18, 2008 letters to Virginia, Maryland, and the District of Columbia.
Virginia	Virginia	Virginia	
Arlington	Arlington	Virginia proposed Virginia portions of the Washington, DC-MD-VA MSA to be determined in attainment.	
Fairfax	Fairfax		
Loudoun	Loudoun		
Prince William	Prince William		
Alexandria	Alexandria		
Maryland	Maryland	Maryland	
Montgomery	Montgomery	Montgomery	
Prince George's	Prince George's	Prince George's	
Fredrick	Fredrick	Fredrick	
Charles	Charles	Charles	
Calvert			