



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUN 29 2004

The Honorable Anthony A. Williams
Mayor of the District of Columbia
Johnson A. Wilson Building
1350 Pennsylvania Avenue, NW
Washington, D.C. 20004

Dear Mayor Williams:

Fine-particle pollution represents one of the most significant barriers to clean air facing our nation today. These tiny particles – about 1/30th the diameter of a human hair – have been scientifically linked to serious human health problems. Their ability to be suspended in air for long periods of time makes them a public health threat far beyond the source of emissions. An important part of our nation's commitment to clean, healthy air deals with reducing levels of this fine particle or PM_{2.5} pollution.

In February, the District submitted its recommended boundaries for the PM_{2.5} area.

We have thoroughly reviewed your recommendation and the technical information you have submitted to support your recommendations. We appreciate the effort made to develop this supporting information. Consistent with the Clean Air Act, this letter is to notify you that based on the information contained in your submittal, the Environmental Protection Agency (EPA) agrees with your recommended nonattainment designation specifically for the District of Columbia.

Your Environmental Commissioner will receive a copy of this letter with a more detailed enclosure containing a description of areas where EPA intends to modify your State recommendations, and the basis for such modification. Should you have additional information that you wish to be considered by EPA in this process, we request that you provide it to us by September 1, 2004.

You will hear from us again in November when EPA takes the final step in the PM_{2.5} designation process and determines those areas that are in attainment (or unclassifiable) and those areas that are nonattainment. For areas in attainment, the challenge will lie not only to maintain, but also to continue the progress you have made toward clean air. It is a commitment to no backsliding in the District's clean air status for fine particles. EPA will also issue a proposed fine particle implementation rule prior to final designations, which will allow you to proceed with planning to achieve clean air.

Customer Service Hotline: 1-800-438-2474

The Bush Administration is addressing fine particle pollution with a comprehensive national clean air strategy. This strategy includes EPA's recent rule to reduce pollution ~~from~~ nonroad diesel *engines*, and the proposed rule to reduce pollution **from** power plants in the eastern United States. These two rules are important components of EPA's efforts to help States and localities meet the **more** protective national fine-particle and 8-hour ozone air quality standards. Together these rules will help all areas of the country achieve cleaner air.

Should you or your staff have any questions, I invite you to contact our Regional *Air* Office. We look forward to a continued dialogue with you as we work together to implement the PM2.5 standards.

Sincerely,



Donald S. Welsh
Regional Administrator

Enclosures

cc w/Enclosures: Theodore Gordon, Senior Deputy Director, Dept. of Health

**District of Columbia
Enclosure A**

The fourth column of the following table identifies the individual counties and cities that EPA intends to designate as nonattainment.

Area	Washington DC MSA in 1999 Metropolitan Statistical Area	District of Columbia/Maryland/Virginia Recommendations	EPA Recommendations
Washington, DC MSA (Part of the Washington-Baltimore CMSA)	District of Columbia	District of Columbia	District of Columbia
Maryland portion of the Washington DC MSA	Calvert Charles Frederick Montgomery Prince Georges	Prince Georges	Charles Frederick Montgomery Prince Georges
Virginia portion of the Washington DC MSA	Alexandria (City) Arlington Clarke Culpeper Fairfax Fairfax (City) Falls Church (City) Fauquier Fredericksburg King George Loudoun Manassas (City) Manassas Park (City) Prince William Spotsylvania Stafford Warren	None Recommended	Arlington Alexandria (City) Fairfax Fairfax (City) Falls Church (City) Loudoun Manassas (City) Manassas Park (City) Prince William
Total Number of Areas	23	2	14

Enclosure B

Washington DC Area

State Summary

Washington DC's recommendation was submitted on February 13, 2004, by Mayor Anthony Williams. Washington DC recommended that the entire MSA be designated as nonattainment.

Discussion

The Baltimore-Washington CMSA has been split into three smaller MSA areas for planning purposes and for consistency with the 8-hour ozone designations. The Washington DC MSA is comprised of 23 areas: 5 in Maryland, 17 in Virginia, and the District of Columbia. Washington DC and Prince Georges County in Maryland have monitored violations of the fine particulate (PM_{2.5}) standard of 15.0 µg/m³. Based on the monitored violations, the Washington DC MSA is considered a presumptive nonattainment area. The Washington DC monitor is intended to be used as the Design Value monitor for this MSA.

EPA's recommendations for the Maryland and Virginia portions of the MSA are summarized in the attached table.

Summary of Evaluation

EPA agrees with Washington DC's recommendation of nonattainment for the District based on the air quality data for the years 2001-2003.

Enclosure C

An Explanation of EPA's 9-Factor Analysis

Factor 1. Emissions in areas potentially included versus excluded from the nonattainment area:

The analysis for factor 1 looks at emissions of carbonaceous particles ("carbon"), inorganic particles ("crustal"), SO₂, and NO_x. EPA computed a composite emission score for each county by multiplying the county's emissions as a fraction of the metropolitan area emissions for each of these pollutants times a corresponding air quality weighting factor. The air quality weighting factors for each area are given below and reflect the percentages of the total estimated "urban excess" value found as, respectively, carbonaceous particles, miscellaneous inorganic particles ("crustal material"), ammonium sulfate, and ammonium nitrate. These scores add to 100 for the metropolitan area counties. Composite scores were also calculated for counties adjacent to the metropolitan area. Tables presented under factor 1 present the emissions of carbonaceous particles, inorganic particles, SO₂, and NO_x and the composite emission scores for the counties in the corresponding metropolitan area and adjacent counties. Metropolitan area counties are in bold. Emissions data indicate the potential for a county to contribute to observed violations, often making the emissions data the most important factor in assessing boundaries of nonattainment areas.

"Urban excess" values are derived by comparing urban monitored component concentrations against rural monitored component concentrations. Concentrations of the four PM_{2.5} components are obtained from local data if available (or, if necessary, from the nearest available urban site), and are compared to available rural concentrations. The monitoring sites used for this purpose are identified below. Although this information is air quality information, it is presented under Factor 1 due to its integration into the analysis of emissions information.

Factor 2. Air quality in potentially included versus excluded areas:

The air quality analysis looks at the annual average design value for each area based on data for 2001 to 2003. Counties without monitors are not listed.

Factor 3. Population density and degree of urbanization including commercial development in included versus excluded areas:

Tables presented under factor 3 show the 2003 population for each metropolitan area, as well as the population density for each county in that area. Population data indicate the likelihood of population-based emissions that might contribute to violations.

Factor 4. Traffic and commuting patterns:

The traffic and commuting analysis looks at the number of commuters in each county who drive to another county within the metropolitan area ("Number"), the percent of total commuters in

each county who commute to other counties within the metropolitan area (“percent”)*, as well as the total Vehicle Miles Traveled (VMT) for each county in thousands of miles. A county with numerous commuters is generally an integral part of the area, and would be an appropriate part of the domain of some mobile source strategies, thus warranting inclusion in the nonattainment area.

*Note that the percent of commuters traveling to counties within the metropolitan area is based on the total number of commuters from that county. This total includes commuters who may travel outside the metropolitan area from their county of origin.

Factor 5. Expected growth:

The expected growth analysis looks at the percent growth for counties in each metropolitan area from 1990 to 2000.

Factor 6. Meteorology:

The meteorology analysis looks at wind data gathered over a ten year period by the National Weather Service. Tables presented under factor 6 list the annual average wind direction frequencies by quadrant for each county in the corresponding metropolitan area. These data show that annual average PM_{2.5} concentrations are influenced by emissions in any direction at various times, but these data may also suggest that emissions in some directions relative to the violation may be more prone to contribute than emissions in other directions.

Factor 7. Geography/topography:

The geography/topography analysis looks at physical features of the land that might have an effect on the airshed, and therefore, the distribution of particulate matter over an area. nonattainment areas.

Factor 8. Jurisdictional boundaries:

The analysis of jurisdictional boundaries looks at the planning and organizational structure of an area to determine if the implementation of controls in a potential nonattainment area can be carried out in a cohesive manner.

Factor 9. Level of control of emission sources:

The level of control analysis looks at what controls are currently implemented in each area.