

US EPA ARCHIVE DOCUMENT



ADRIAN M. FENTY
MAYOR

March 11, 2009

William T. Wisniewski
Acting Regional Administrator
U.S. Environmental Protection Agency, Region III
Mail Code 3RA00
1650 Arch Street
Philadelphia, PA 19103

Subject: Nonattainment Designation Recommendation for the District of Columbia under the New 2008 Ozone Standards

Dear Mr. Wisniewski:

On behalf of the District of Columbia (District), I thank you for the opportunity to make recommendations for the nonattainment areas for ground-level ozone (ozone) pollution 8-hour ambient air quality standards. In the recent years (2006-2008), District's air monitoring stations recorded exceedances of the revised national ambient air quality standard (NAAQS) for 8-hour ozone of 0.075 parts per million (ppm). The ozone air quality design concentration value for 2008 for the District was at 0.087 ppm. The design concentrations for 2006 and 2007 were similarly high at 0.085 ppm and 0.087 ppm, respectively. Additional details on the District's air quality and its air emissions are provided in Attachment A. Based on the monitored air quality data and the recent year design concentration values, and in accordance with Section 107(d)(1) of the Clean Air Act, I am recommending that the entire District be designated as a non-attainment area under the recently revised ozone 8-hour NAAQS.

Being a non-industrial jurisdiction, the District is home to a small number of pollution sources that contribute to ozone precursor emissions in the District. As noted in Attachment A, sources in the District contribute less than ten percent of ozone precursor emissions released in the Washington DC-MD-VA metropolitan statistical area (MSA). Because of the regional nature of ozone pollution, the District requires cooperation from the surrounding jurisdictions for mitigating its air quality issues and achieving the health-based ozone air quality standards. Hence, I am recommending that the nonattainment area for the ozone new 8-hour NAAQS should include at a minimum the entire Washington DC-MD-VA MSA. This recommendation is based on the 12/04/2008 guidance that the U.S. Environmental Protection Agency provided to states and tribes for making recommendations for area designations. The District also supports the idea of using larger combined statistical areas (CSA) instead of the MSA, based on sound science, for mitigating ozone.

If you need further information on this matter, please call George S. Hawkins, Director, District Department of the Environment, at (202) 535-2615.

Sincerely,



Mayor Adrian M. Fenty
Government of the District of Columbia

cc: Judith Katz, Director, Air Protection Division, EPA Region III
George S. Hawkins, Director, District Department of the Environment
Cecily Beall, Associate Director, Air Quality Division, DDOE

Enclosure

ATTACHMENT A AIR QUALITY IN THE DISTRICT OF COLUMBIA

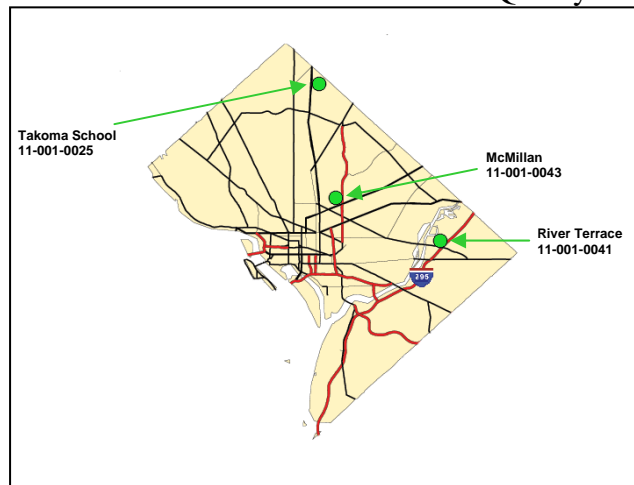
1) District of Columbia's Ambient Air Monitoring Network

District Department of the Environment's Air Quality Division (AQD) operates and maintains the ambient air quality monitoring network for the District as mandated by the federal Clean Air Act. The network consists of five air monitoring stations. Ambient measurements are made for all criteria air pollutants, urban air toxics, and various pollutants including ground-level ozone and fine particulate matter (PM_{2.5}) precursor compounds. Of the five stations in the District, three stations measure ground-level ozone (ozone) and report air quality levels every hour. Figure 1 below shows the ambient ozone network on a DC map, and the Table 1 gives the monitor type and related information for the ozone measurement stations.

Table 1: District of Columbia's Ground-level Ozone Air Quality Monitoring Stations

Site Name	Site ID	Address	Monitor Type
Takoma Park	11-001-0025	Dahlia St. & Piney Branch Road N.W.	NAMS/ SLAMS NAMS/ SLAMS
River Terrace	11-001-0041	34 th & Dix Streets, N.E.	SLAMS
McMillan Reservoir	11-001-0043	2500 First Street, N.W	PAMS Type 2 Air Quality Index National Air Toxics Trends PM ₂₅ Chemical Speciation Network (CSN) NCore Network (candidate site)

Figure 1: District of Columbia's Ground-level Ozone Air Quality Monitoring Network



Monitored air quality data from these three stations are used to track the District's progress towards achieving its air quality goals for meeting the national ambient air quality standards (NAAQS) and for verifying attainment status for ozone.

2) Ozone Air Quality Design Concentrations

Presented below in Table 2 and Figure 2 are the design concentration values, in parts per million (ppm), for 8-hour ozone air quality for recent years from the District’s ambient stations network. The design concentrations were determined by following EPA’s guidance. Note that the data for calendar year 2008 are yet to be certified by the state air agency, and AQD will transmit official certification to EPA Region III by the July 1, 2009 deadline.

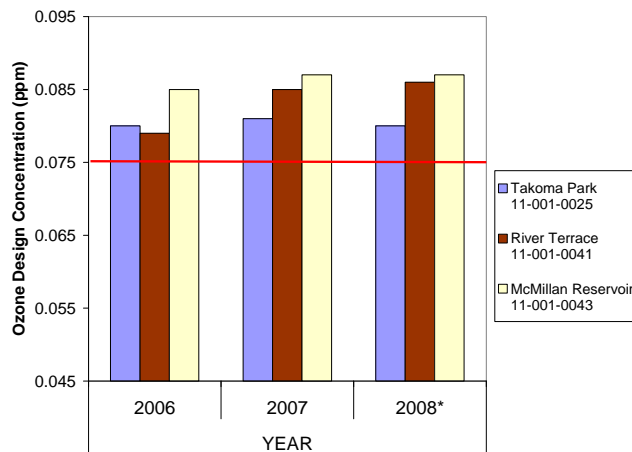
Table 2: Ozone design value concentrations in the District of Columbia

Station Name/Id	Design Concentration (ppm)		
	2006	2007	2008*
Takoma Park 11-001-0025	0.080	0.081	0.080
River Terrace 11-001-0041	0.079	0.085	0.086
McMillan Reservoir 11-001-0043	0.085	0.087	0.087
District of Columbia	0.085	0.087	0.087

**Data for calendar year 2008 are yet to be certified*

The design concentrations at the District’s monitoring stations varied between 0.079 ppm and 0.087 ppm during the evaluation period and recorded violations of the ozone 8-hour new NAAQS (0.075 ppm).

Figure 2: Ozone design value concentrations at District’s monitoring stations



Also, based on EPA’s guidance, the highest concentration value among the three stations will determine the District’s design concentration for a given evaluation year. The 8-hour ozone design concentrations in the District for 2006, 2007 and 2008 are 0.085 ppm, 0.087 ppm, and 0.087 ppm, respectively. The District’s ozone design concentrations were in violation of the 0.075 ppm 8-hour NAAQS, and the level of violation in 2008 was 0.012 ppm above the ozone air quality standard.

3) Ozone Precursor Pollutant Emissions in the District and the Metropolitan Areas

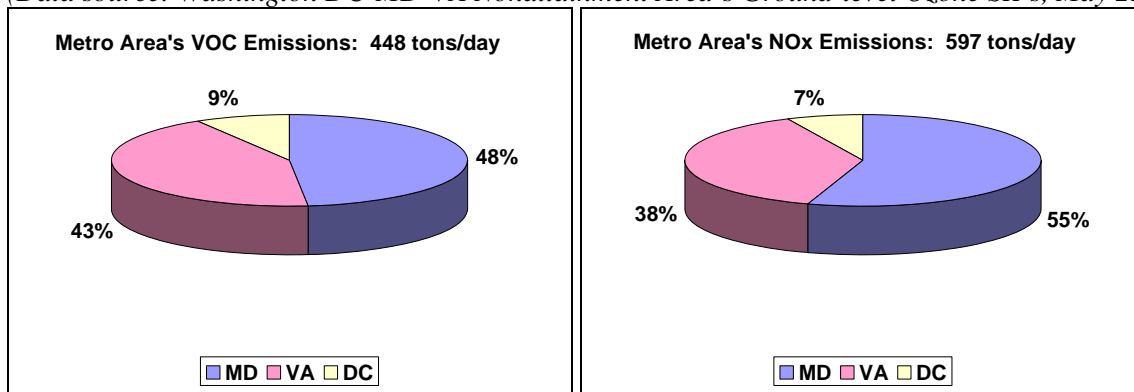
Volatile organic compounds (VOCs) and nitrogen oxides (NOx) are the primary precursor pollutants that lead to ground-level ozone air quality issues during warmer months of the year. Presented in Table 3 and Figure 3 below are the jurisdiction-level air pollution emissions for the metropolitan Washington, DC-MD-VA area for a typical summer day in 2002. The Metro area includes the District of Columbia; Charles, Calvert, Frederick, Montgomery and Prince George’s counties in Maryland; the cities of Bowie, College Park, Gaithersburg, Greenbelt, Frederick, Rockville, and Takoma Park in suburban Maryland; and Arlington, Fairfax, Loudoun, Prince William counties and the cities of Alexandria, Falls Church, Fairfax, Manassas, and Manassas Park in northern Virginia.

Table 3: Pollution Emissions for Ozone Precursors in the Metropolitan Washington Area for 2002
(Data source: Washington DC-MD-VA Nonattainment Area’s Ground-level Ozone SIPs, May 23, 2007)

Jurisdiction	Volatile Organic Compounds (VOCs)	Nitrogen Oxides (NOx)
District of Columbia	39.1	41.3
Suburban Maryland	217.0	329.0
Northern Virginia	192.2	226.9
Metropolitan Area Total Emissions (Tons/Day)	448.3	597.2

Being a non-industrial jurisdiction, District is home to a small number of sources that contribute to its ozone air quality problem and precursor pollution emissions in the metropolitan area.

Figure 3: Pollution Emissions for Ozone Precursors in the Metropolitan Washington Area in 2002
(Data source: Washington DC-MD-VA Nonattainment Area’s Ground-level Ozone SIPs, May 23, 2007)



The air pollution sources in the metropolitan area emitted 448.3 tons/day VOCs and 597.2 tons/day NOx during the year 2002. Contribution from the District’s sources was 39.1 tons of VOCs and 41.3 tons of NOx per day, which represents seven to nine percent of the ozone precursor emissions in the Washington DC-MD-VA metropolitan area.

The District has implemented stricter controls on its sources since the early nineties and continues its pursuit to further reduce its contribution. The District’s local controls include an inspection and maintenance program to curtail pollution from vehicles, NOx budget programs on stationary point

sources, and VOC controls for solvents, industrial and auto maintenance products, gasoline handling, and other diverse area sources. Table 4 below shows the projected air pollution emissions for 2009 for the metropolitan Washington, DC-MD-VA area for a typical summer day.

Table 4: Projected Emissions for Ozone Precursors in the Metropolitan Washington Area for 2009
 (Data source: Washington DC-MD-VA Nonattainment Area's Ground-level Ozone SIPs, May 23, 2007)

Jurisdiction	Volatile Organic Compounds (VOCs)	Nitrogen Oxides (NOx)
District of Columbia	31.5	27.6
Suburban Maryland	168.5	179.6
Northern Virginia	148.8	154.9
Metropolitan Area Total Emissions (Tons/Day)	348.8	362.1

A comparison of the ozone precursor pollution emissions between 2002 and 2009 in the District indicates a 19% reduction in VOC emissions and a 33% drop in NOx emissions. Despite its significant efforts to reduce ozone precursor pollution from its sources, the monitors in the District did not show proportionate improvement in ambient air quality, and the District's air monitors continue to record violations of the 8-hour ozone NAAQS.

Analyses by the Ozone Transport Commission (OTC) since the 1990s point to transported pollution as having a significant contribution for the ozone air quality in OTC member states including the District. Mitigating pollution transport is critical for a non-industrial urban jurisdiction with air quality issues such as the District. National efforts to impose additional controls on on-road and off-road mobile and disperse area sources and stricter controls on large industrial sources and power plants to curtail transported pollution are needed to assist the District and other nonattainment areas in the nation to achieve the new 8-hour ozone NAAQS.