

Region 3 Plan Summary
Metropolitan Washington, DC Ozone Nonattainment Area

Title: 15 % Rate of Progress (ROP) Plan for District of Columbia Portion of the Metropolitan Washington, DC ozone nonattainment area

Federal Register Dates: July 7, 1998, 63 FR 36578 (final rule- conditional approval); August 5, 1999, 64 FR 42629 (proposed rule- full approval), 64 FR 42600 (final rule-full approval)

EPA Effective date: October 4, 1999

State Submittal Dates: January 13, 1994; revisions submitted May 15, 1995, November 3, 1997, and April 16, 1998.

Affected Areas: The entire District of Columbia

Summary of the Plan: Air quality planning for the Washington, D.C. ozone nonattainment area is done jointly by the District of Columbia, Maryland, Virginia and the Metropolitan Washington Air Quality Committee (MWAQC). The MWAQC is composed of state and local elected officials, state air quality and transportation planning directors and the chair of the National Capital Region Transportation Planning Board.

The nonattainment area-wide plan calculates a nonattainment area-wide target level of emissions. The nonattainment area-wide plan projects emissions growth from 1990 to 1996 for the entire nonattainment area. Under the MWAQC planning process, a common suite of control measures is adopted that will ensure that the nonattainment area-wide target level of emissions is achieved. The nonattainment area-wide plan thus effectively apportions among the three jurisdictions the amount of creditable emission reductions that each jurisdiction must achieve in order for the entire nonattainment area to achieve a 15% reduction in VOC net of growth. Each State adopts as a SIP revision the MWAQC-approved plan including identification of the amount of creditable emission reductions that the State must achieve for the nonattainment area-wide plan to get 15% accounting for any growth in VOC emission from 1990 to 1996.

The April 16, 1998 15% ROP plan SIP submittal has revised all portions of the prior submittals and by itself constitutes a comprehensive 15% ROP plan SIP. The April 16, 1998 submittal was prepared by MWAQC to enable the District of Columbia, Maryland and Virginia to fulfill the conditions to the approval of their 15% ROP plans.

Transportation Conformity Budgets: Under EPA's transportation conformity rule the 15% ROP plan is a control strategy SIP. This plan establishes a budget of 133.7 tons per day of VOC emissions for on-road mobile sources throughout the entire Metropolitan Washington, D.C. ozone nonattainment

area and does not establish a budget for nitrogen oxides (NOx) emissions.

Table 1: Washington, D.C. Area 1990 Rate-of-Progress Base Year Inventory				
Source Category	District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals
Point	1.0	5.3	8.1	14.4
On-road Mobile	33.8	110.1	108.6	252.5
Off-road Mobile	5.5	32.1	32.8	70.4
Area	20.0	94.2	77.0	191.2
Totals	60.3	241.7	226.5	528.5

Table 2: Washington, D.C. Area 1990 Adjusted Base Year Inventory adjusted to 1996				
Source Category	District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals
Point	1.0	5.3	8.1	14.4
On-road Mobile	24.7	83.5	78.9	187.1
Off-road Mobile	5.5	32.1	32.8	70.4
Area	20.0	94.2	77.0	191.2
Totals	51.2	215.1	196.8	463.1

Table 2B: Washington, D.C. Area 1990 Adjusted Base Year Inventory adjusted to 1999				
Source Category	District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals
Point	1.0	5.3	8.1	14.4
On-road Mobile	23.4	79.3	75.4	178.1
Off-road Mobile	5.5	32.1	32.8	70.4
Area	20.0	94.2	77.0	191.2
Totals	49.9	210.9	193.3	454.1

Table 3: Washington, D.C. Area Target Level Calculation					
		District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals

1	1990 Adjusted Base Year Emissions Inventory Adjusted to 1996 (From Table 2A)	51.2	215.1	196.8	463.1
2	1990 Adjusted Base Year Emissions Inventory Adjusted to 1999	49.9	210.9	193.3	454.1
3	Fleet Turnover Correction (FTC) 1996 to 1999 (line 1 minus line 2)	1.3	4.2	3.5	9.0
5	1990 Adjusted Emissions Base Year Inventory Adjusted to 1996 (from Line 2)	51.2	215.1	196.8	463.1
6	Base 15% Reduction: Target Level = 85% of Adjusted Emissions inventory (0.85 C Line 4)	43.5	182.8	167.3	393.6
7	Target Level Corrected for 1996 to 1999 FTC (Line 6 minus line 3)	42.2	178.6	163.8	384.6

**Table 4: Washington, D.C. Area
Growth in Emissions 1990 to 1996**

Projected 1996 Inventory - Current Control Strategy

	Source Category	District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals
	Point	1.0	5.7	9.1	15.8
	On-road Mobile	23.8	92.7	86.4	202.9
	Off-road Mobile	5.2	34.4	37.7	77.3
	Area	18.5	101.9	86.2	206.6
A	Totals	48.5	234.7	219.4	502.6

B	1990 Adjusted Base year Inventory Adjusted to 1996	51.2	215.3	196.8	463.3
C	Projected Growth 1990 to 1996 (Line A -Line B)	-2.7	19.4	22.6	39.3

**Table 5: Washington, D.C. Area
Apportionment of Reduction Needs**

Nonattainment area-wide Sum of Creditable Emission Reduction Needs					
1	Projected Uncontrolled 1996 Emissions				502.6
2	1996 Target Adjusted for 1996 to 1999 FTC (Line 7 Table 3.)				384.6
3	Total Creditable Emission Reduction Needs (Line 1 minus Line 2)				118.0
<p align="center">Creditable Emission Reduction Needs Apportioned by Jurisdiction</p>					
		District of Columbia	Maryland	Virginia	Washington, D.C. Area Totals (TPD)
4	Allocation of Creditable Emission Reductions to each State *	8.5	57.5	51.7	117.7

* Part of the small discrepancy between this value of 117.7 contained in the plan and that of line 3 of this Table V is due to rounding the apportioned emission reductions to the nearest tenth. The actual values are determined by multiplying each State's reductions-in-progress from Table 6-1 of the plan by the ratio of the regional emission reduction needs (117.8) and the regional total reductions-in-progress (126.8). See Chapter 7.0 of the plan. For example, for the District's emission reduction needs were determined as $9.2 \times 117.8/126.8 = 8.547$. Similarly, for Maryland and Virginia the values are 57.506 and 51.747. These total 117.8. The remainder of the difference is due to rounding in the Base 15% Reduction Target Level (Line 6, Table III) and in the Plan's rounding of projected inventories.

Basing the emission reduction needs upon an area-wide reduction requirement of 118 tons per day would yield for the District: $9.2 \times 118.0/126.8 = 8.562 = 8.6$ (rounded). For Maryland and Virginia, the values are 57.604 and 51.834, respectively.

Table 7 - Summary of Creditable and Non-Creditable Emission Reductions District of Columbia (Tons/day)

Nominal Required Reduction			8.5
Fully Approvable Creditable Reductions:	Type of Measure	Approval Status	Creditable Emissions Reductions (tons per day)
FMVCP Tier I	Federal Rule	Promulgated at 40 CFR Part 86	1.5
Reformulated Gasoline	Federal Rule	Promulgated at 40 CFR Part, 80 subpart D	
On-Road			1.1
Off-Road			0.1
Auto Refinishing	Federal Rule	Promulgated at 40 CFR Part 59, subpart B	0.5
AIM Surface Coatings	Federal Rule	Promulgated at 40 CFR Part 59, subpart D	1.6
Consumer & Commercial Products.	Federal Rule	Promulgated at 40 CFR Part 59, subpart C	0.6
Enhanced Inspection and Maintenance Program	District Rules	SIP Approved (6/11/99, 64 FR 31498)	3.8
Total Fully Creditable Measures:			9.2

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