2007 FEDERAL MAINTENANCE PLAN FOR MAINTAINING THE NATIONAL OZONE STANDARD IN THE MONTEREY BAY REGION

Approved by the Monterey Bay Unified Air Pollution Control District Board

March 21, 2007

and

Approved by the Association of Monterey Bay Area Governments

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Prepared by Bob Nunes, Air Quality Planner II
Reviewed by Jean Getchell, Supervising Planner

Monterey Bay Unified Air Pollution Control District
24580 Silver Cloud Court
Monterey, California 93940

2007 FEDERAL MAINTENANCE PLAN FOR THE MONTEREY BAY REGION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDIX

1.0 INTRODUCTION

This plan presents the strategy for maintaining the National Ambient Air Quality Standard (NAAQS) for ozone in the North Central Coast Air Basin (NCCAB). The NCCAB is comprised of Monterey, Santa Cruz and San Benito Counties, and is one of 14 air basins in California. It encompasses over 5,100 square miles, which include varied climate, vegetation and geography. The Association of Monterey Bay Area Governments (AMBAG) estimates that in 2005, the NCCAB had a population of 758,555 which is expected to increase to 849,521 by 2015. A map of the NCCAB is shown in Figure 1-1.

1.1 PLAN REQUIREMENTS

This plan was prepared according to the United States Environmental Protection Agency's "Maintenance Plan Guidance Document for Certain 8-Hour Ozone Areas Under Section 110(a) (1) of Clean Air Act", dated May 20, 2005. This established the planning requirements for areas such as the NCCAB, which are attainment for the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone and have an approved Federal Maintenance Plan for the previous 1-hour NAAQS. A copy of the guidance document for this plan is provided in Appendix A.

The Guidance Document indicates that the Maintenance Plan is to include:

- Attainment Inventory
- Maintenance Demonstration
- Commitment to Continue Ambient Air Quality Monitoring
- Contingency Plan
- Verification of Continued Attainment

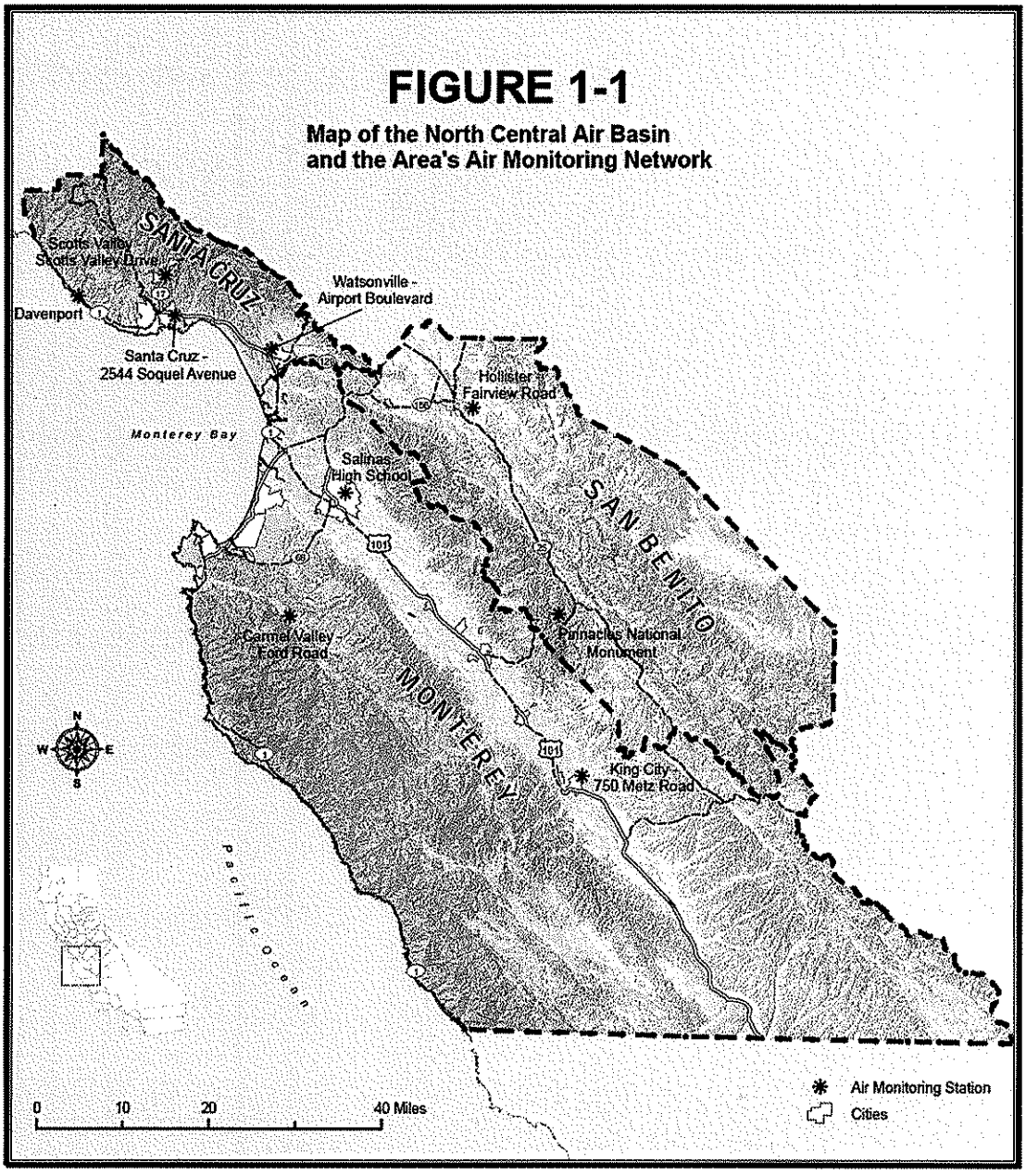
This plan is an update to the 1994 Federal Maintenance Plan which was prepared for maintaining the 1-hour NAAQS for ozone. That standard has since been revoked and is superseded by the current 8-hour ozone standard. The prior plan included transportation conformity. However, transportation conformity no longer applies in areas such as the NCCAB where both the 1-hour standard has been revoked and the area is attainment for the 8-hour standard. The Maintenance Plan thus does not have motor vehicle emissions budgets.

1.2 APPROVAL PROCESS

The plan for the NCCAB was prepared by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) in consultation with AMBAG, which in addition to the Board of Directors of the MBUAPCD and the California Air Resources Board (ARB), must approve the plan. The ARB must then include this plan as part of the State Implementation Plan (SIP) to EPA by June 15, 2007. Additional updates to the approved plan are not required.

FIGURE 1-1

Map of the North Central Air Basin and the Area's Air Monitoring Network



2.0 NATIONAL AMBIENT AIR QUALITY STANDARD FOR OZONE AND AREA DESIGNATION BASED ON AMBIENT AIR QUALITY

The federal Clean Air Act requires EPA to set NAAQS (40 CFR part 50) for pollutants considered harmful. The standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health and the environment. Designations are based on actual measured levels of ambient air quality in an area. They are used by EPA to classify an area's air quality in relation to the standard and to establish planning requirements. This chapter describes these elements in detail.

2.1 NATIONAL AMBIENT AIR QUALITY STANDARD FOR OZONE

The NAAQS for ozone was revised by EPA in 1997 to reflect a new 8-hour average concentration, which was to be more health protective than the then-existing 1-hour standard. National standards include both a Primary and Secondary Standard. Primary Standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, while Secondary Standards are established to protect the public welfare from any known or anticipated adverse effects of a pollutant. In the case of ozone, both the Primary and Secondary Standards are the same. The standard also specifies the method that must be used to monitor ambient levels of the pollutant.

The NAAQS for ozone is shown in Table 2-1.

TABLE 2-1 - NATIONAL AMBIENT AIR QUALITY STANDARD FOR OZONE

Pollutant	Averaging Time	Federal Standard		
		Primary	Secondary	Method
Ozone	8-Hour	0.08 ppm	0.08 ppm	Ultraviolet Photometry
	1-Hour*	Not Applicable	Not Applicable	

Notes:
* The Federal 1-hour standard was revoked in the NCCAB on June 15, 2005.

The NAAQS for ozone is attained when ambient air monitoring data indicate that the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard.

2.2 AMBIENT AIR QUALITY MONITORING IN THE NCCAB

Air Monitoring Network

Ozone is currently monitored at 9 locations in the NCCAB. These include Pinnacles National Monument, Hollister, Scotts Valley, Carmel Valley, Salinas, King City, Watsonville, Santa Cruz, and Davenport. The District operates 7 of these stations, which are located in populated areas. The National Parks Service operates the station at

Pinnacles National Monument (NM) while an industry consortium operates the King City station. To be used for regulatory purposes, data from these sites must be obtained according to methods established by EPA, which assure that the data are accurate, consistent and representative of the area. The official "Data for Record" from these sites must comply with these criteria to be used by EPA to establish the area's designation in relation to the federal ozone standard. The official monitoring sites in the NCCAB are shown in Figure 1-1.

Commitment to Continue Ambient Air Monitoring

EPA requires that States continue to operate air quality monitors in accord with 40 CFR 58 to verify maintenance of the 8-hour ozone standard in the area. The District will continue to operate an ozone monitoring network in the area. Any modification to the District's network, such as the removal of duplicative or unnecessary monitors, would be accomplished through close consultation with the EPA Regional office.

2.3 AREA DESIGNATION

Designation Process

Designations are made by EPA to formally gauge an area's air quality in relation to the NAAQS and to establish the planning requirements for the area. Areas which fail to achieve the standard are required to develop implementation plans for achieving the standard, while areas such as the NCCAB which meet the standard must submit a plan to maintain the standard.

Area designations are developed by EPA by evaluating the Data for Record for each station in the area with complete data for at least a three year period. Federal Design Values are established by determining the 3-year average of the fourth highest recorded annual concentration at each site in the area. The area's Federal Design Value becomes the highest Design Value recorded at all the stations in the area. For the NCCAB, the area's Design Values are set by the monitoring the results at Pinnacles N.M.

An area is considered within the standard when its Design Value is within the level of the standard. It should be noted that because the Design Value is based on the three-year average of the fourth highest recorded annual concentration, there can be days within the three-year designation period when ambient levels actually exceed the standard but the area does not violate the standard.

NCCAB Designation

Effective June 15, 2004 EPA designated the NCCAB as an attainment area for the 8-hour NAAQS for ozone. This was based on data from the three year period 2001 to 2003. Table 2 of the EPA May 20, 2005 Guidance Document further indicates that all three counties of the NCCAB were determined to be attainment areas for the 8-hour standard. Because the NCCAB had previously achieved the 1-hour NAAQS for ozone

and had an approved maintenance plan, the pre-existing 1-hour NAAQS was revoked in the NCCAB by EPA one year later on June 15, 2005.

Ambient measurements of ozone are critical to determining an area's attainment status in relation to the standard. Ambient measurements and the corresponding Design Measurement are generally recorded in parts per million (ppm) taken to three significant figures (i.e. 0.xxx ppm). However, because the 8-Hour NAAQS for ozone has only two significant figures (0.08 ppm), EPA applies the standard rounding convention to data, so Design Values less than 0.085 ppm are within the standard. (For example, a Design Value of 0.086 ppm rounds to 0.09 ppm which exceeds the standard, while a Design Value of 0.084 ppm rounds to 0.08 ppm, which does not exceed the standard. For calculational artifacts beyond the third decimal place, EPA convention requires that those numbers be truncated, or simply deleted. Thus, the NCCAB's three year Design Value of 0.0817 ppm truncates to the Design Value of 0.081 ppm used for designation.)

The derivation of the federal ozone Design Value is summarized in Table 2-2:

TABLE 2-2 - DERIVATION OF NCCAB 8-HOUR DESIGN VALUE
Pinnacles Data 2001-2003

Rank	2001		2002		2003		3-Year Average
	Date	ppm	Date	ppm	Date	ppm	ppm
1st	May 30	0.088	July 10	0.094	June 2	0.088	0.090
2nd	July 2	0.086	Aug 10	0.090	Sept 12	0.085	0.087
3rd	May 31	0.080	Sept 22	0.088	June 27	0.084	0.084
4th	**July 3**	**0.079**	**Aug 9**	**0.086**	**Sept 19**	**0.080**	**0.081**

1) Source – ARB's Aerometric Data Analysis & Management system (ADAM), June 30, 2006.

The data demonstrates that the NCCAB's Design Value, at 0.081 ppm, is within the level of the standard (< 0.085 ppm) so it is appropriate that the area be designated attainment for the federal ozone standard.

Design Values for the EPA's 2001-2003 designation period for all nine stations in the NCCAB's ozone monitoring network are shown in Table 2-3.

TABLE 2-3 - NCCAB STATION SPECIFIC 8-HOUR DESIGN VALUES
2001-2003 Designation Period

Station	Design Value* (ppm)	Within Standard?**
Pinnacles	0.081	Yes
Hollister	0.073	Yes
Carmel Valley	0.066	Yes
Scotts Valley	0.065	Yes
King City	0.062	Yes

Salinas	0.059	Yes
Watsonville	0.057	Yes
Santa Cruz	0.056	Yes
Davenport	0.052	Yes
NCCAB	**0.081**	**Yes**

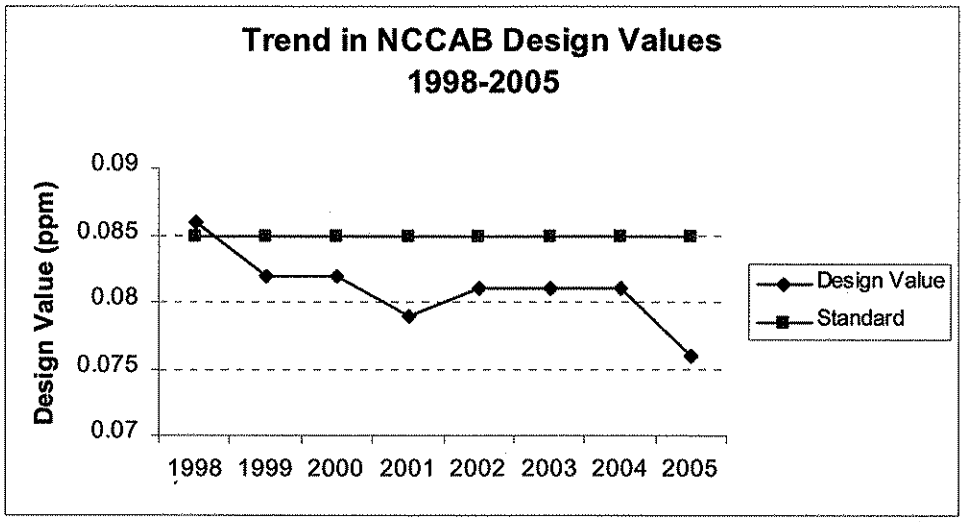
* Data provided by ARB in June 2006 from its Aerometric Data Analysis & Management system (ADAM).
**Design Values less than 0.085 ppm are within the standard.

The table further demonstrates that all stations, as well as the air basin, have attained the federal 8-hour standard. Design Values for the urban areas, where the potential exposure of large populations to ozone is of concern, are all within the NAAQS. This includes Salinas, the largest city in the NCCAB, which has one of the area's lowest Design Values.

Data through 2005 indicate that all stations, including Pinnacles NM, have had Design Values for at least the past five years within the standard.

Figure 2-1 illustrates the trend in NCCAB Design Values (Pinnacles NM) between 1998 and 2005.

FIGURE 2-1



Although the official designations were made in 2004 based on 2001 to 2003 data the chart shows that Design Values for the NCCAB have actually been within the standard since 1999 based on 1997-1999 data, so the area likely achieved the standard before the formal Designation Period. In summary, ambient levels of ozone at all monitoring locations in the NCCAB are within the limits of the NAAQS for ozone and have been for a number of years.

3.0 EMISSION INVENTORY AND MAINTENANCE DEMONSTRATION

EPA guidance for preparing Maintenance Plans requires that a maintenance demonstration demonstrate that the area would maintain the standard for the 10 years following designation. The demonstration can be developed using either an inventory-based indicator or photochemical modeling. The maintenance demonstration prepared for this plan is based on the inventory-based indicator.

Although any of the three years in the 2001-2003 designation period may be used for the Maintenance Inventory, 2002 is recommended for the Maintenance Inventory and 2005 to 2014 be used as the 10-year Maintenance Period. Although not required, maintenance should be demonstrated beyond the 10-year maintenance period.

3.1 EMISSION INVENTORY

The emission inventory consists of the two primary ozone precursor gases, which are Volatile Organic Compounds (VOC) and the Oxides of Nitrogen (NO_x). Because ozone is seasonally highest during the summer months of May through October, emissions are measured in tons per day for a typical day during the May through October ozone season.

The NCCAB emission inventory for the years 1990 to 2030 is shown in Table 3-1 for VOC's and in Table 3-2 for NO_x. The inventory is based on Version 1.06 of ARB's 8-Hour Ozone SIP Emission Inventory Projections, which include ARB and District emission inventory data for stationary and area sources. Mobile source emissions are based on ARB's draft EMFAC 2007 (Version 2.3) emission model for on-road motor vehicles and ARB's draft OFFROAD 2007 model for off-road sources.

3.2 2005-2014 MAINTENANCE PERIOD DEMONSTRATION

The objective of the maintenance demonstration is to show that the inventory will not exceed the level of the 2002 Maintenance Inventory during the 10-year period following designation. Ideally, a declining trend should be shown throughout the period to provide an increasing margin of safety to maintain the standard.

Volatile Organic Compounds

Figure 3-1 demonstrates that the 2002 VOC Maintenance Inventory will be maintained throughout the 2005 to 2014 Maintenance Period (MP). For every year in the MP, the projected inventory is less than the level of the 2002 Maintenance Inventory. The figure further demonstrates that emissions of VOC decline continuously throughout the 10-year Maintenance Period. By 2014, the end of the Maintenance Period, the VOC inventory is about 82% of the 2002 VOC Maintenance. The declining trend in the inventory is consistent with the declining Design Values shown in Figure 2-1.

Oxides of Nitrogen

For NO_x, the Maintenance Demonstration is somewhat more complicated. Although by 2014 the inventory is only 77% of the 2002 Maintenance Inventory, Figure 3-2 indicates the NO_x Maintenance Inventory was actually exceeded in 2005 and 2006. This reflects increased NO_x emissions that have been estimated by the draft EMFAC 2007 model, primarily from the heavy-heavy duty diesel truck category.

The anomaly reflected by the draft EMFAC2007 model should not jeopardize maintenance of the standard in the NCCAB. A review of air monitoring data for 2005 and preliminary data for 2006 indicate that the area's Design Value remained well within the standard. Based on the fourth highest recorded annual concentration of 8-hour ozone readings from Pinnacles NM, the NCCAB's 3-year average Design Value's for 2005 and 2006 are estimated to be 0.076 and 0.075 ppm, respectively, which are well below the 0.085 ppm level of the standard. Thus, air monitoring data strongly suggest that the federal standard was maintained in 2005 and 2006.

In addition, if the Maintenance Inventory were considered to be the sum of ozone precursors (VOC + NO_x), the slight increase in NO_x for 2005 and 2006 is more than offset by even larger decrease in VOCs during those years. Total ozone precursors during the Maintenance Period are less than they were in 2002 and decrease continuously throughout the 2005 to 2014 period. Accordingly, the information provided in this section demonstrates successful maintenance of the standard during the mandatory 10-year period following designation.

3.3 EXTENDED MAINTENANCE DEMONSTRATION (1990-2030)

As recommended in the Guidance Document, the plan also considers the longer-term inventory trend beyond the 2014 end projection year of the Maintenance Period. To assess the longer-term trend, inventory years from 1990 to the 2030 forecast horizon were considered. The projections are shown in Figure 3-3 for VOCs and Figure 3-4 for NO_x.

The 1990 maintenance inventory for the prior 1-hour standard and the 2002 Maintenance Inventory for the 8-hour standard are also illustrated in the charts. The charts indicate that both the VOC and NO_x inventories should remain well below their respective Maintenance Inventories through 2030 for both the 8-hour and prior 1-hour standard.

Figure 3-3 indicates that VOCs decline continuously beyond 2014, creating an ever widening margin for maintaining the standard. By 2030, the projected VOC inventory declines to 68 tons per day, which is about 80% of the 8-hour Maintenance Inventory and 56% of the old 1-hour Maintenance Inventory. Figure 3-4 indicates that NO_x emissions are also forecast to decline beyond 2014 to the forecast horizon in 2030. Projected emissions of NO_x in 2030 are about 57% of the 8-hour Maintenance Inventory and 37% of the maintenance level for the prior standard.

Thus, the Maintenance Demonstration extended to the 2030 forecast horizon indicates that the Maintenance Inventories for both VOCs and NO_x should not be exceeded through 2030.

3.4 VERIFICATION OF CONTINUED ATTAINMENT

In addition to continuing ambient monitoring to verify maintenance of the standard, the District will also periodically update the emission inventory to verify that the maintenance inventory is not exceeded. The stationary source emission inventory is updated annually. The mobile source inventory is updated every two years or as updates to the mobile source emission models (EMFAC and OFFROAD) are issued by ARB. The entire inventory and forecasts, including the stationary, area and mobile categories, are updated by the ARB and District every three years.

TABLE 3-1 DRAFT EMISSION INVENTORY & FORECASTS FOR VOLATILE ORGANIC COMPOUNDS FOR NORTH CENTRAL COAST AIR BASIN

Ozone Seasonal Planning Inventory (Tons/Day)

VOC SOURCE CATEGORY	1990	2000	2002	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2030
STATIONARY SOURCES:																	
Fuel Combustion																	
Electric Utilities	0.55	0.68	0.33	0.51	0.53	0.51	0.50	0.52	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Cogeneration	0.69	0.28	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32
Oil and Gas Production	0.12	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Manufacturing and Industrial	0.10	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.12	0.12
Food and Agricultural Processing	0.11	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.16	0.17
Service and Commercial	0.05	0.60	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.11	0.12	0.12
Other	0.03	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04
TOTAL - Fuel Combustion	1.65	1.84	0.99	1.19	1.21	1.19	1.18	1.21	1.24	1.24	1.24	1.25	1.26	1.26	1.29	1.32	1.34
Waste Disposal																	
Landfills	1.26	1.28	1.34	1.42	1.45	1.48	1.50	1.53	1.56	1.58	1.61	1.63	1.66	1.68	1.80	1.92	2.04
TOTAL	1.26	1.28	1.34	1.42	1.45	1.48	1.50	1.53	1.56	1.58	1.61	1.63	1.66	1.68	1.80	1.92	2.04
Cleaning & Surface Coatings																	
Laundering	0.31	0.17	0.17	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.22	0.23	0.24
Degreasing	2.20	1.25	1.23	1.22	1.21	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.29	1.30	1.35	1.40	1.45
Coatings & Process Solvents	1.80	1.08	1.11	1.18	1.21	1.23	1.26	1.29	1.32	1.34	1.37	1.39	1.42	1.50	1.62	1.73	1.82
Printing	0.29	0.22	0.23	0.24	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.29	0.31	0.34	0.36
Adhesives & Sealants	0.92	0.64	0.62	0.58	0.57	0.56	0.54	0.53	0.52	0.51	0.50	0.49	0.48	0.47	0.43	0.40	0.36
Other	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TOTAL - Cleaning & Sfc Coatings	5.52	3.38	3.37	3.40	3.42	3.44	3.46	3.50	3.54	3.57	3.60	3.63	3.68	3.76	3.93	4.10	4.24
Petro Production & Marketing																	
Oil and Gas Production	1.55	0.78	0.73	0.77	0.78	0.78	0.77	0.78	0.77	0.77	0.77	0.76	0.76	0.76	0.75	0.73	0.72
Petroleum Marketing	3.03	1.69	1.60	1.64	1.65	1.65	1.65	1.65	1.67	1.69	1.71	1.73	1.75	1.77	1.90	2.03	2.14
Other	0.40	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TOTAL - Petro Prod. & Marketing	4.98	2.47	2.33	2.41	2.43	2.43	2.42	2.43	2.45	2.47	2.48	2.50	2.52	2.54	2.66	2.78	2.87
Industrial Processes																	
Chemical	0.00	0.05	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Food and Agriculture	0.18	0.29	0.34	0.36	0.38	0.39	0.41	0.42	0.44	0.45	0.47	0.49	0.50	0.52	0.62	0.74	0.89
Mineral Processes	0.05	0.04	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12
Electronics	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.19	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
TOTAL - Industrial Processes	0.22	0.61	0.53	0.62	0.63	0.65	0.67	0.68	0.70	0.72	0.74	0.76	0.77	0.79	0.90	1.03	1.19
Use of Banked Emissions																	
TOTAL	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
TOTAL STATIONARY SOURCES	**13.74**	**9.68**	**8.66**	**9.14**	**9.25**	**9.28**	**9.34**	**9.46**	**9.58**	**9.68**	**9.77**	**9.87**	**9.99**	**10.15**	**10.68**	**11.25**	**11.78**
AREA-WIDE SOURCES:																	
Solvent Evaporation																	
Consumer Products	6.64	5.40	5.38	4.84	4.84	4.84	4.89	4.94	4.99	5.04	5.09	5.15	5.20	5.25	5.51	5.80	6.08
Architectural Coatings	2.74	2.95	2.98	2.50	2.51	2.52	2.52	2.53	2.54	2.55	2.57	2.58	2.59	2.60	2.67	2.75	2.82
Pesticides/Fertilizers	7.96	12.74	12.62	11.62	11.17	10.71	10.27	9.79	9.32	9.42	9.51	9.61	9.70	9.80	10.31	10.86	11.45
Asphalt Paving/Roofing	6.73	2.85	2.92	2.97	2.99	2.99	3.00	3.01	3.02	3.03	3.05	3.06	3.07	3.09	3.14	3.20	3.25
TOTAL - Solvent Evaporation	24.07	23.94	23.90	21.92	21.51	21.07	20.68	20.28	19.87	20.04	20.22	20.39	20.56	20.74	21.64	22.60	23.61
Miscellaneous Processes																	
Residential Fuel Combustion	0.41	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.38	0.38
Livestock Husbandry	3.34	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43
Structural & Auto Fires	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Prescribed Burns	5.51	7.99	9.08	11.55	11.68	11.82	12.36	12.91	13.05	13.05	13.05	13.05	13.05	13.05	13.06	13.06	13.06
Cooking	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.15	0.16	0.16
TOTAL - Miscellaneous	9.37	11.91	13.01	15.48	15.61	15.75	16.29	16.84	16.98	16.99	16.99	16.99	16.99	17.00	17.02	17.03	17.05
TOTAL AREA-WIDE SOURCES	**33.44**	**35.86**	**36.91**	**37.40**	**37.12**	**36.82**	**36.98**	**37.12**	**36.85**	**37.03**	**37.21**	**37.38**	**37.56**	**37.73**	**38.65**	**39.64**	**40.66**
MOBILE SOURCES:																	
On-Road Motor Vehicles (EMFAC2007)																	
Light Duty Passenger	26.12	13.00	10.87	8.09	7.51	6.92	6.33	5.76	5.17	4.63	4.15	3.74	3.39	3.10	2.13	1.58	1.19
Light Duty Trucks (LDT1)	10.87	5.80	4.87	3.75	3.64	3.52	3.39	3.24	3.08	2.92	2.76	2.60	2.43	2.28	1.62	1.20	0.86
Light Duty Trucks (LDT2)	7.13	3.90	3.51	3.13	3.01	2.90	2.80	2.69	2.58	2.45	2.33	2.22	2.10	2.00	1.61	1.37	1.17
Medium Duty Trucks	1.32	0.99	1.00	1.05	1.01	0.98	0.94	0.92	0.89	0.86	0.84	0.82	0.79	0.77	0.66	0.57	0.51
Light Heavy Duty Gas Trucks (LHDV1)	1.06	0.60	0.50	0.44	0.38	0.34	0.30	0.27	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16
Light Heavy Duty Gas Trucks (LHDV2)	1.13	0.49	0.43	0.37	0.35	0.33	0.31	0.29	0.26	0.24	0.23	0.21	0.19	0.18	0.12	0.08	0.07
Medium Heavy Duty Gas Trucks	2.84	1.05	0.83	0.68	0.63	0.58	0.53	0.48	0.44	0.39	0.35	0.30	0.27	0.24	0.13	0.08	0.07
Heavy Heavy Duty Gas Trucks	0.73	0.45	0.41	0.40	0.36	0.33	0.29	0.27	0.24	0.22	0.20	0.18	0.16	0.14	0.08	0.05	0.03
Light Heavy Duty Diesel Trucks (LHDV1)	0.01	0.00	0.00	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Light Heavy Duty Diesel Trucks (LHDV2)	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Medium Heavy Duty Diesel Trucks	0.10	0.10	0.10	0.13	0.13	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.08	0.07	0.07
Heavy Heavy Duty Diesel Trucks	1.57	0.96	0.89	1.25	1.19	1.12	1.05	0.98	0.91	0.85	0.79	0.73	0.67	0.62	0.42	0.32	0.27
Motorcycles	1.73	0.82	1.00	1.31	1.29	1.27	1.23	1.20	1.17	1.14	1.12	1.10	1.09	1.08	1.07	1.09	1.13
Heavy Duty Diesel Urban Buses	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Heavy Duty Gas Urban Buses	0.07	0.07	0.08	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
School Buses	0.10	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03
Other Buses	0.24	0.13	0.11	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Motor Homes	0.22	0.17	0.13	0.09	0.08	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.01	0.01	0.00
TOTAL - On-Road Motor Vehicles	**55.28**	**28.64**	**24.83**	**20.93**	**19.83**	**18.71**	**17.60**	**16.50**	**15.39**	**14.33**	**13.34**	**12.46**	**11.64**	**10.92**	**8.29**	**6.74**	**5.67**
Other Mobile Sources																	
Aircraft	0.39	0.38	0.41	0.44	0.45	0.45	0.46	0.47	0.47	0.48	0.49	0.49	0.50	0.50	0.53	0.55	0.57
Trains	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships & Commercial Boats	0.17	0.13	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.08
Recreational Boats	6.04	6.82	5.87	5.55	5.40	5.27	5.07	4.88	4.72	4.58	4.47	4.37	4.29	4.22	3.96	4.05	4.63
Off-Road Recreational Vehicles	1.94	1.09	0.96	1.05	1.02	1.01	0.98	0.98	0.97	0.97	0.98	0.99	1.01	1.03	1.20	1.37	1.58
Off-Road Equipment	5.46	4.18	3.93	3.94	3.71	3.54	3.36	3.19	3.04	2.89	2.75	2.62	2.49	2.38	2.05	1.98	1.98
Farm Equipment	1.81	1.51	1.43	1.31	1.25	1.19	1.12	1.07	1.02	0.97	0.89	0.82	0.75	0.69	0.45	0.34	0.28
Fuel Storage - Other Mobile	1.88	1.45	1.12	1.03	0.99	0.94	0.72	0.66	0.62	0.57	0.54	0.51	0.48	0.46	0.38	0.33	0.30
TOTAL - Other Mobile	**17.69**	**15.56**	**13.85**	**13.45**	**12.94**	**12.51**	**11.82**	**11.35**	**10.94**	**10.57**	**10.20**	**9.88**	**9.60**	**9.36**	**8.63**	**8.70**	**9.43**
TOTAL MOBILE SOURCES	**72.97**	**44.21**	**38.68**	**34.38**	**32.77**	**31.23**	**29.41**	**27.85**	**26.34**	**24.89**	**23.54**	**22.34**	**21.24**	**20.28**	**16.91**	**15.44**	**15.10**
VOC TOTAL ALL SOURCES	**120.15**	**89.74**	**84.26**	**80.92**	**79.14**	**77.33**	**75.73**	**74.43**	**72.77**	**71.60**	**70.52**	**69.59**	**68.78**	**68.16**	**66.25**	**66.32**	**67.54**

TABLE 3-2 DRAFT EMISSION INVENTORY & FORECASTS FOR OXIDES OF NITROGEN FOR NORTH CENTRAL COAST AIR BASIN

Ozone Seasonal Planning Inventory (Tons/Day)

NOx SOURCE CATEGORY	1990	2000	2002	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2020	2025	2030
STATIONARY SOURCES:																	
Fuel Combustion																	
Electric Utilities	16.33	9.15	1.48	1.97	1.97	2.04	1.92	2.01	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
Cogeneration	0.72	0.48	0.49	0.52	0.52	0.52	0.52	0.52	0.53	0.53	0.53	0.53	0.54	0.54	0.55	0.55	0.56
Oil and Gas Production	2.33	0.20	0.22	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.26	0.26	0.26
Manufacturing and Industrial	13.02	11.09	11.64	12.56	12.56	12.80	13.14	13.31	13.54	13.79	14.04	14.29	14.54	14.79	15.61	16.43	17.24
Food and Agricultural Processing	1.09	1.00	0.98	0.99	0.99	0.98	0.96	0.95	0.94	0.93	0.91	0.89	0.87	0.85	0.72	0.54	0.30
Service and Commercial	0.54	0.71	0.62	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.65	0.65	0.66	0.66	0.67	0.67	0.67
Other	0.31	0.34	0.37	0.36	0.36	0.35	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.23	0.23	0.24
TOTAL - Fuel Combustion	34.35	22.97	15.81	17.28	17.28	17.58	17.77	18.01	18.31	18.55	18.78	19.01	19.25	19.48	20.14	20.78	21.36
Waste Disposal																	
Landfills and Incinerators	0.00	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
TOTAL	0.00	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
Petroleum Production																	
Oil and Gas Production	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL - Petroleum Production	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial Processes																	
Mineral Processes	3.26	3.28	2.66	2.80	2.85	2.91	2.97	3.03	3.08	3.14	3.20	3.26	3.31	3.37	3.60	3.84	4.08
Other	0.00	0.02	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.08	0.09
TOTAL - Industrial Processes	3.26	3.31	2.70	2.84	2.90	2.96	3.02	3.08	3.14	3.20	3.26	3.31	3.37	3.43	3.67	3.92	4.17
Use of Banked Emissions																	
TOTAL	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
TOTAL STATIONARY SOURCES	37.78	26.41	18.63	20.25	20.31	20.67	20.93	21.23	21.58	21.88	22.17	22.46	22.76	23.05	23.96	24.85	25.68
AREA-WIDE SOURCES:																	
Miscellaneous Processes																	
Residential Fuel Combustion	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.96	0.97	0.99
Prescribed Burns	1.39	2.31	2.51	3.12	3.18	3.24	3.30	3.36	3.42	3.42	3.42	3.42	3.42	3.42	3.43	3.43	3.43
TOTAL - Miscellaneous	2.32	3.24	3.44	4.05	4.11	4.17	4.23	4.30	4.36	4.36	4.36	4.36	4.37	4.37	4.39	4.40	4.42
TOTAL AREA-WIDE SOURCES	2.32	3.24	3.44	4.05	4.11	4.17	4.23	4.30	4.36	4.36	4.36	4.36	4.37	4.37	4.39	4.40	4.42
MOBILE SOURCES:																	
On-Road Motor Vehicles (EMFAC2007)																	
Light Duty Passenger	19.21	10.58	8.96	6.46	6.04	5.60	5.16	4.71	4.27	3.85	3.46	3.13	2.83	2.57	1.63	1.10	0.81
Light Duty Trucks (LDT1)	10.65	6.50	5.44	3.87	3.72	3.55	3.38	3.21	3.02	2.82	2.63	2.45	2.27	2.10	1.38	0.89	0.56
Light Duty Trucks (LDT2)	7.91	5.96	5.45	4.74	4.53	4.32	4.10	3.88	3.65	3.41	3.19	2.97	2.76	2.57	1.80	1.30	0.95
Medium Duty Trucks	1.68	1.82	1.93	2.06	1.98	1.88	1.79	1.70	1.62	1.53	1.46	1.38	1.30	1.22	0.87	0.63	0.48
Light Heavy Duty Gas Trucks (LHDV1)	0.58	0.37	0.35	0.42	0.42	0.43	0.43	0.43	0.42	0.42	0.42	0.41	0.41	0.40	0.40	0.38	0.38
Light Heavy Duty Gas Trucks (LHDV2)	0.77	0.40	0.36	0.32	0.31	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.19	0.17	0.16
Medium Heavy Duty Gas Trucks	1.47	0.71	0.63	0.60	0.58	0.55	0.52	0.49	0.46	0.43	0.40	0.37	0.34	0.31	0.20	0.14	0.11
Heavy Heavy Duty Gas Trucks	1.52	1.11	1.05	1.01	0.93	0.84	0.76	0.69	0.62	0.57	0.51	0.46	0.41	0.37	0.21	0.14	0.11
Light Heavy Duty Diesel Trucks (LHDV1)	0.08	0.07	0.07	0.96	0.85	0.75	0.67	0.62	0.55	0.50	0.45	0.42	0.39	0.36	0.27	0.19	0.14
Light Heavy Duty Diesel Trucks (LHDV2)	0.26	0.50	0.51	0.66	0.65	0.63	0.61	0.60	0.56	0.53	0.49	0.46	0.43	0.41	0.29	0.20	0.15
Medium Heavy Duty Diesel Trucks	4.36	4.22	4.16	4.65	4.52	4.33	4.12	3.92	3.63	3.34	3.06	2.80	2.55	2.32	1.46	1.00	0.79
Heavy Heavy Duty Diesel Trucks	11.42	11.67	12.01	17.33	16.48	15.44	14.41	13.43	12.27	11.27	10.28	9.32	8.45	7.66	4.89	3.53	2.96
Motorcycles	0.23	0.16	0.23	0.33	0.34	0.35	0.35	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.35	0.36	0.37
Heavy Duty Diesel Urban Buses	0.49	0.48	0.59	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.53	0.52	0.52	0.51	0.47	0.45	0.38
Heavy Duty Gas Urban Buses	0.04	0.11	0.13	0.09	0.09	0.09	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
School Buses	0.30	0.40	0.45	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.47	0.46	0.45	0.45	0.41	0.39	0.36
Other Buses	0.67	0.41	0.58	0.63	0.61	0.60	0.58	0.56	0.54	0.51	0.49	0.46	0.43	0.41	0.28	0.19	0.14
Motor Homes	0.36	0.37	0.32	0.26	0.25	0.24	0.24	0.23	0.22	0.21	0.19	0.18	0.17	0.15	0.10	0.07	0.04
TOTAL - On-Road Motor Vehicles	62.01	45.83	43.22	45.40	43.32	40.93	38.55	36.21	33.60	31.11	28.72	26.48	24.38	22.47	15.30	11.22	8.99
Other Mobile Sources																	
Aircraft	0.36	0.35	0.38	0.42	0.43	0.43	0.44	0.45	0.46	0.46	0.47	0.48	0.49	0.49	0.52	0.55	0.57
Trains	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10
Ships & Commercial Boats	1.77	1.32	1.29	1.21	1.17	1.14	1.11	1.07	1.04	1.01	0.97	0.94	0.91	0.88	0.92	1.18	1.52
Recreational Boats	0.61	0.65	0.76	1.01	1.08	1.14	1.15	1.15	1.15	1.15	1.16	1.16	1.17	1.18	1.25	1.31	1.51
Off-Road Recreational Vehicles	0.03	0.07	0.09	0.13	0.14	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.15	0.16	0.17	0.17
Off-Road Equipment	9.99	7.75	7.58	7.10	6.92	6.68	6.41	6.18	5.96	5.72	5.49	5.22	4.95	4.66	3.50	2.91	2.75
Farm Equipment	10.18	7.50	7.08	6.41	6.19	5.91	5.61	5.37	5.18	4.92	4.59	4.27	3.99	3.71	2.44	1.63	1.16
TOTAL - Other Mobile	23.02	17.72	17.27	16.36	16.00	15.52	14.93	14.43	14.00	13.49	12.91	12.31	11.75	11.16	8.88	7.85	7.79
TOTAL MOBILE SOURCES	85.03	63.56	60.49	61.75	59.32	56.45	53.49	50.64	47.59	44.59	41.63	38.79	36.13	33.64	24.19	19.07	16.78
NOx TOTAL ALL SOURCES	125.13	93.21	82.56	86.05	83.74	81.30	78.65	76.16	73.53	70.83	68.16	65.61	63.26	61.05	52.53	48.32	46.87

FIGURE 3-1

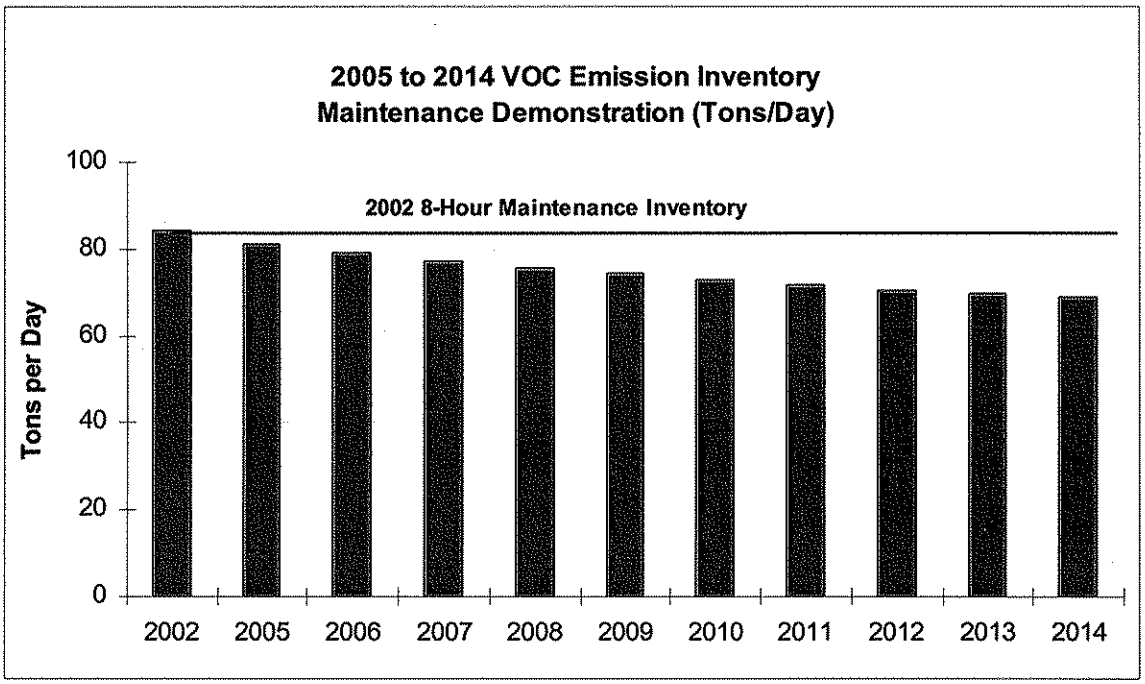


FIGURE 3-2

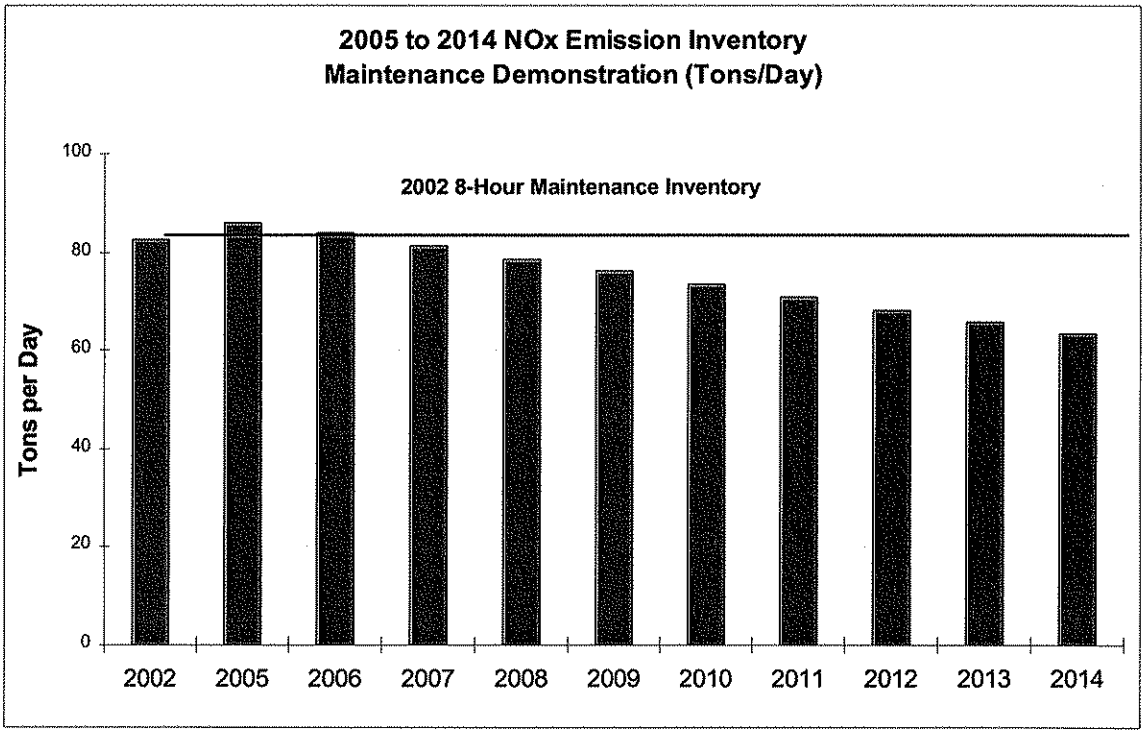


FIGURE 3-3

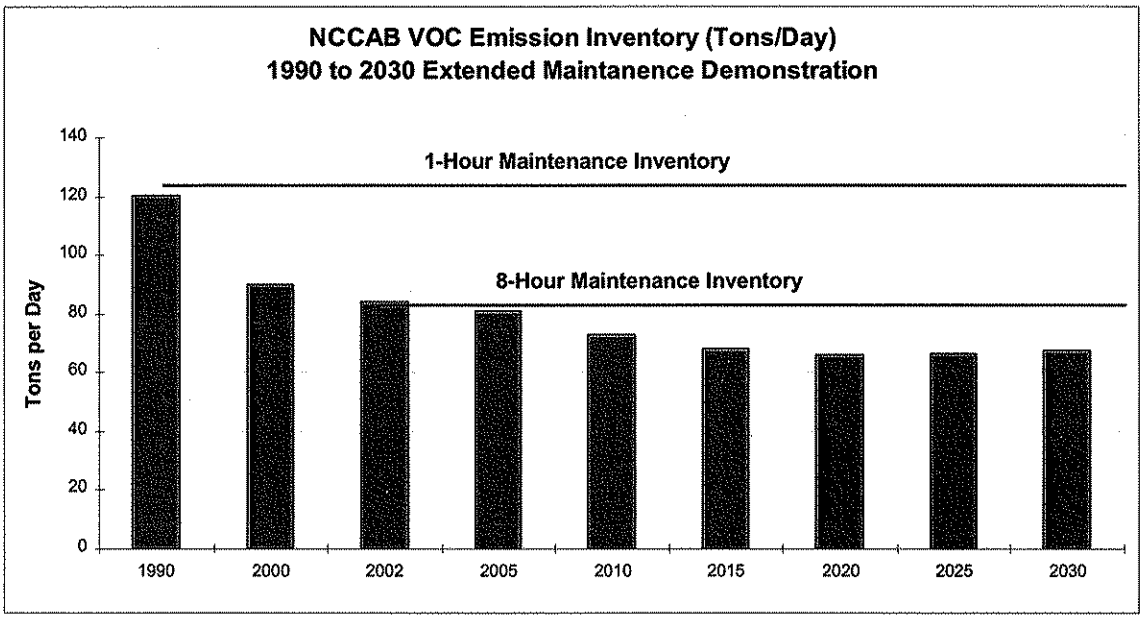
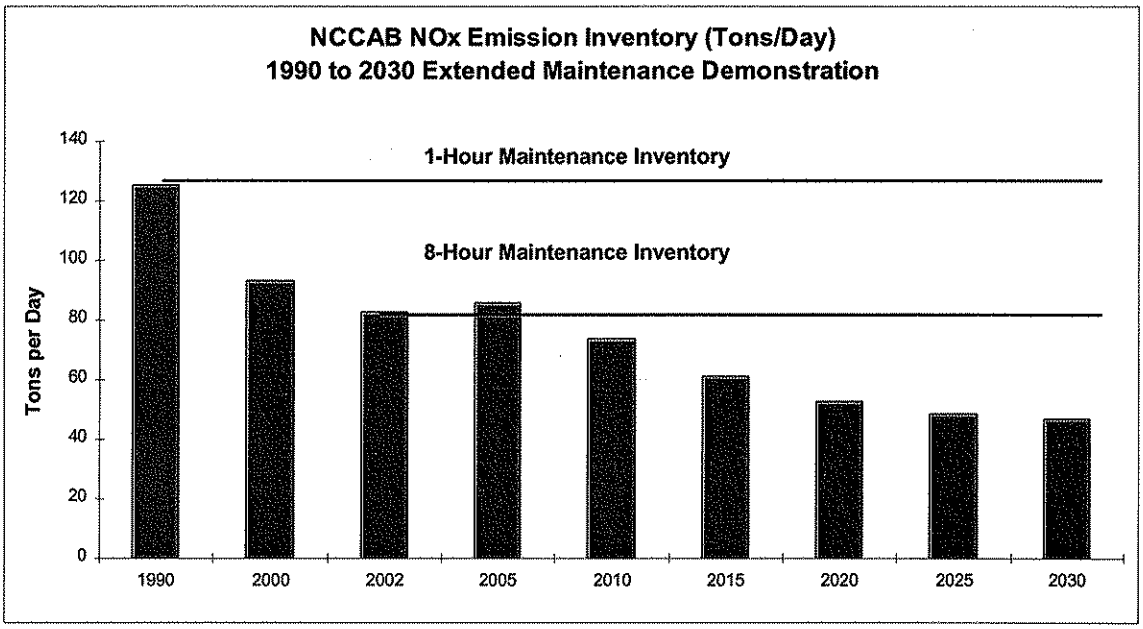


FIGURE 3-4



4.0 CONTINGENCY PLAN

A contingency plan is required to ensure that any future violation of the standard is promptly corrected. EPA guidance further recommends a proactive contingency plan that can be implemented prior to the time the area begins to violate the standard.

Two Elements: Contingency Trigger and Contingency Measures

The contingency plan must include two elements. The first is a contingency trigger or indicator, which would be used to implement measures should air quality in the area approach the level of the federal standard. The second element includes the contingency measures, which are templates for adoption of future rules. The contingency plan will remain in effect indefinitely after the 2005-2014 Maintenance Period.

4.1 CONTINGENCY PLAN TRIGGERS

The contingency trigger involves two proactive components that can be activated prior to the area violating the standard. The first is based on the emission forecasts and the second is based on ambient air monitoring data. The contingency plan will be implemented when both of these triggers are exceeded, unless determined to be not necessary by EPA in instances such as a temporary period of trigger exceedances caused by unusual events which are not expected to recur.

Inventory Trigger

The inventory trigger is designed to prevent the NCCAB emission inventory from exceeding the level of the 2002 Maintenance Inventory. The inventory based trigger would be met if the inventory is forecast to reach 95% of the Maintenance Inventory. Based on current Maintenance Inventory, this threshold would be 90.4 tons per day for VOC and 79.1 tons per day for NOx. VOC measures would be given priority if the VOC trigger is exceeded and NO_x measures would be given priority if the NO_x trigger is exceeded. Fortunately, the inventory forecasts presented in the prior section are forecast to remain significantly below those levels through the 2030 forecast horizon.

Ambient Trigger

The ambient trigger is based on the trend in the area's Design Value and was developed based on a review of historical air monitoring data. The ambient trigger would be met if the average of the fourth highest annual concentration for the two most recent years of complete data from the area's highest station reached 0.085 ppm or higher. Implementation of the contingency plan would be discontinued if ambient air monitoring data for the third year indicated the area would not violate the standard.

Influence of Transported Ozone

While the contingency triggers focus on emissions from local sources in the NCCAB, outside factors can also play an important role in exceedance events that impact the area's Design Value. ARB assessments of the cause of exceedances at the NCCAB's design site, Pinnacles National Monument, indicate that transport from upwind air basins also plays a significant role during high ozone days. Consequently, the District will work with ARB and the upwind Districts to make sure that adequate measures to mitigate transport are implemented to prevent the NCCAB from violating the NAAQS for ozone.

Consultation with EPA

Prior to implementing the control plan, the District would consult with EPA to notify them that the trigger had been exceeded and to discuss whether or not the prospects of the NCCAB violating the NAAQS represented a permanent threat requiring permanent controls, or if it appeared to be a temporary situation caused by factors beyond regulatory control. For instance, in 1998 (1996-1998 data) the Design Value temporarily exceeded the level of the NAAQS due to the occurrence of two summers when unusual weather produced numerous periods of extended air stagnation. Subsequently, the Design Value has been within the standard so it would not have been prudent to implement a permanent control program involving a full array of new rules to remedy a temporary situation.

4.2 CONTINGENCY CONTROL MEASURES

This section describes the contingency measures considered for this plan. These measures are also part of the District's 2004 Air Quality Management Plan, adopted in pursuant to requirements of the California Clean Air Act. The measures would be scheduled for adoption within six months of the contingency trigger being activated.

Rules would be refined and developed based on the District's rule development procedures, which require 60 to 90 day review by ARB and EPA, a six to eight week public review period, workshops, legal notices prior to public hearings, and public hearings before the District Advisory Committee and District Board. Rules would be implemented within 6 to 24 months of adoption.

The measures are described below:

1. Automobile Refinishing

This measure would reduce VOC emissions and affect refinishing of motor vehicles and other mobile equipment using lacquers, enamels, and other coatings sprayed in paint booths or in the open. This measure would require high transfer efficiency equipment, lower solvent coatings, or add-on air pollution control equipment to achieve up to 60% emission control from surface preparation, priming, top coating, and

equipment cleaning operations. Methods of add-on control include installing totally enclosed paint spray booths equipped with incinerator or carbon adsorption control systems.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	60%
	2005 2010
Affected Emissions: (tpd)	0.27 0.28
Cost Effectiveness:	$2,500 to $12,500 per ton reduced

2. Boilers, Steam Generators and Process Heaters

This control measure would reduce NO_x emissions from boilers, steam generators, and process heaters (with a rated heat input of 2 million BTUs per hour and greater) used in industrial, institutional, and commercial operations by requiring such devices to comply with a 30 parts per million NO_x emission limit (at 3 percent oxygen) for gaseous fuels and a 40 parts per million NO_x emission limit (at 3 percent oxygen) for liquid fuels. This measure does not apply to: a) electric utility boilers that are used exclusively to produce electricity for sale; and b) waste-heat recovery boilers that are used to recover heat from the exhaust of combustion turbines.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	40%
	2005 2010
Affected Emissions: (tpd)	0.37 0.39
Cost Effectiveness:	$5,500 to $13,500 per ton reduced

3. Fiberglass Fabrication/Polyester Resin Use

This control measure would reduce VOC emissions from fiberglass operations by specifying monomer resin content limits and requiring use of vapor suppressants, high transfer techniques, and low-VOC cleanup solvents.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	40%
	2005 2010
Affected Emissions: (tpd)	0.13 0.13
Cost Effectiveness:	$4,000 to $15,000 per ton reduced

4. Fixed and Floating Roof Petroleum Storage Tanks

This control measure would require a tight-fitting secondary seal on most floating-roof storage tanks. A tight-fitting secondary seal, such as the RFI Weatherguard,

exerts a pressure of 30 pounds per square inch (psi) on the wall of the tank. This control measure would also revise District Rule 417 by lowering the vapor pressure exemption level to 0.5 psi, so that more storage tanks would be required to install vapor recovery control systems.

Applicable District Rule:	Rule 417
Required Board Action:	Rule Revision
Estimated Control Efficiency:	75%
	2005 2010
Affected Emissions: (tpd)	0.24 0.24
Cost Effectiveness:	$15,000 to $50,000 per ton reduced

5. Fugitive Emissions from Petroleum Production

This control measure would reduce fugitive VOC emissions from valves, fittings, pumps, compressors, pressure relief devices, stuffing boxes, diaphragms, hatches, sightglasses, meters, and other components at oil and gas production fields/processing facilities and pipeline transfer stations. This measure would establish leak limits and requirements for inspection/maintenance programs.

Applicable District Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	35%
	2005 2010
Affected Emissions: (tpd)	0.24 0.25
Cost Effectiveness:	$15,000 to $50,000 per ton reduced

6. Graphic Arts Printing and Coating Operations

This control measure would reduce emissions from graphic arts operations by establishing solvent content limits for inks, fountain solutions, and clean-up solvents. Types of firms in this category include newspaper, periodical and book publishers, greeting card companies, and companies that print on paperboard containers and boxes. The control measure would apply to printing operations emitting 60 pounds or more of VOC per month.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	20%
	2005 2010
Affected Emissions: (tpd)	0.24 0.26
Cost Effectiveness	$1,000 savings to $15,000 per ton reduced

7. Marine Coatings

This control measure would require the use of lower volatile organic compound content for high volatile solvent content coatings currently in use. Also, this measure would establish equipment and operating procedures to minimize the evaporation of solvents used for cleaning spray equipment and for surface preparation.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	20%
	2005 2010
Affected Emissions: (tpd)	0.05 0.05
Cost Effectiveness:	$2,500 to $12,500 per ton reduced

8. Petroleum Dry Cleaners

Several cleaning agents are used in the cleaning industry. The most common are perchloroethylene and Stoddard solutions. Perchloroethylene is not considered as a reactive compound in the formation of ozone. This control measure would require operators of dry cleaning facilities which use Stoddard, a petroleum-based solvent, to control VOC emissions by at least 90 percent by use of activated carbon absorption or other appropriate means. This measure would also include operating requirements to control fugitive VOC Emissions.

Applicable District Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	90%
	2005 2010
Affected Emissions: (tpd)	0.18 0.19
Cost Effectiveness:	$2,500 to $12,500 per ton reduced

9. Stationary Internal Combustion Engines

This control measure would reduce NO_x emissions from gas-fired stationary internal combustion engines rated at 50 or more horsepower by requiring the following:

1) NO_x emissions from a rich-burn engine shall not exceed 50 parts per million, as corrected to 15% oxygen, or shall be reduced by 90%.
2) NO_x emissions from a lean-burn engine shall not exceed 115 parts per million, as corrected to 15% oxygen, or shall be reduced by 80%.
3) Whenever an internal combustion engine is replaced, the replacement power unit must be an electric motor, if feasible.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	25%

	2005	2010
Affected Emissions: (tpd)	0.16	0.18
Cost Effectiveness:	$5,000 to $25,000 per ton reduced	

10. Wood Products Coatings

This control measure would reduce VOC emissions from wood coating operations by requiring the use of low-VOC coatings, more efficient application techniques, and the use of low-VOC cleanup solvents. As an alternative, add-on emission control equipment, such as carbon adsorption or incineration systems, could be used.

Applicable District Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	60%

	2005	2010
Affected Emissions: (tpd)	0.25	0.27
Cost Effectiveness:	$2,500 to $20,000 per ton reduced	

11. Commercial Charbroiling

This control measure would reduce VOC and PM_{10} emissions from chain-driven charbroilers through the use of flameless catalytic oxidizers.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	90%

	2005	2010
Affected Emissions: (tpd)	0.12	0.13
Cost Effectiveness:	$7,500 to $20,000 per ton reduced	

12. Food Product Manufacturing & Processing Operations

This control measure would reduce VOC emissions from the use of solvents in food manufacturing by establishing a VOC limit of 120 grams/liter for general process solvents and 200 grams/liter for sterilization solvents. As an alternative, add-on emission control equipment (carbon adsorption and incineration systems) could be used.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	75%

	2005	2010
Affected Emissions: (tpd)	0.02	0.02

13. Large Water Heaters and Small Boilers

This control measure would reduce NO_x emissions by establishing limits for new and replacement installations of 55 ppm (@ 3% O_2) for units greater than 75,000 Btu/Hr to 400,000 Btu/Hr and 30 ppm (@ 3% O_2) for units greater than 400,000 Btu/Hr.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	35%
	2005 2010
Affected Emissions: (tpd)	0.13 0.13
Cost Effectiveness:	$5,500 to $13,500 per ton reduced

14. Lime Kilns

This control measure would reduce NO_x emissions from lime kilns by establishing the following limits: 0.10 lbs NO_x/MMBtu for gaseous fuel, 0.12 lbs NO_x/MMBtu for distillate oil fuel, and 0.20 lbs NO_x/MMBtu for residual oil fuel.

Applicable APCD Rule:	None
Required Board Action:	Rule Adoption
Estimated Control Efficiency:	30%
	2005 2010
Affected Emissions: (tpd)	0.16 0.16
Cost Effectiveness:	Greater than $30,000 per ton reduced

15. Metal Parts and Products

This control measure would reduce VOC emissions from the coating of metal parts and products by limiting the VOC content of the coatings. As an alternative, add-on emission control equipment (carbon adsorption and incineration systems) could be used.

Applicable APCD	Rule: 434 - Coating of Metal Parts and Products
Required Board Action:	Rule Revision
Estimated Control Efficiency:	30%
	2005 2010
	0.12 0.14
Cost Effectiveness:	$5,000 to $20,000 per ton reduced

16. Semiconductor Manufacturing Operations

This control measure would reduce organic solvent emissions from semiconductor manufacturing operations by requiring: 1) exhaust emission controls (carbon adsorption, thermal or catalytic incineration) on photoresist lines, which have an

emission control efficiency of at least 90%, 2) the use of low-VOC/vapor pressure cleanup solvents, and 3) cleaning sinks with covers and minimum freeboard ratios of 1.

Applicable APCD Rule:		None
Required Board Action:		Rule Adoption
Estimated Control Efficiency:		50%
Affected Emissions:	2005	2010
	0.06	0.06
Cost Effectiveness:	$2,500 to $25,000 per ton reduced	

APPENDIX A

MAINTENANCE PLAN GUIDANCE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

MAY 20 2005

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of Clean Air Act

FROM: Lydia N. Wegman, Director
Air Quality Strategies and Standards Division

TO: Air Division Directors, Regions I-X

SUMMARY

The attached document provides guidance for States in preparing maintenance plans under section 110(a)(1) of the Clean Air Act (CAA) for areas required to do so under 40 CFR 51.905(c) and (d). There are approximately 87 full or partial counties that are affected, listed in Table 2 of the attached document.

BACKGROUND

On April 30, 2004 (69 FR 23858), the Environmental Protection Agency (EPA) designated and classified areas for the 8-hour ground-level ozone National Ambient Air Quality Standard (NAAQS). For most areas, these designations became effective June 15, 2004. Also on April 30, 2004, (69 FR 23951), EPA published the final phase 1 rule for implementation of the 8-hour ozone NAAQS. Section 51.905(c) and (d), established in that rulemaking, set forth requirements for anti-backsliding purposes for areas designated attainment for the 8-hour standard. These provisions require these areas to submit a 10-year maintenance plan under section 110(a)(1) of the CAA if they also were a nonattainment area, or an attainment/ unclassifiable area with a section 175A maintenance plan, under the 1-hour ozone standard.

The purpose of this guidance is to address the maintenance requirements in Section 110(a)(1) of the CAA for these areas.

We appreciate Region IV's leadership and the participation of other Regional Offices in the development of this guidance. In addition, State and local air agencies have reviewed and commented on a prior draft.

Please make this guidance available to the affected State and local air pollution control agencies in your region.

Questions on this guidance may be directed to: John Silvasi (silvasi.john@epa.gov), (919) 541-5666, Sharon Reinders (reinders.sharon@epa.gov), (919) 541-5284, or Annie Nikbakht (nikbakht.annie@epa.gov), (919) 541-5246.

cc: OPSG

Maintenance Plan Guidance Document for Certain 8-hour Ozone Areas Under Section 110(a)(1) of Clean Air Act

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Research Triangle Park NC 27711

May 20, 2005

General Applicability

1. What is the purpose of this guidance?

Response: In a Federal Register (FR) notice published April 30, 2004 (69 FR 23858), the Environmental Protection Agency (EPA) designated and classified areas for the 8-hour ground-level ozone national ambient air quality standard (NAAQS). For most areas these designations became effective June 15, 2004.[1] The purpose of this guidance is to address the maintenance requirements in Section 110(a)(1) of the Clean Air Act (CAA) for certain areas designated unclassifiable/attainment for the 8-hour ozone NAAQS. Specifically, the purpose of this document is to give the States guidance in developing a maintenance plan for those areas that are designated as unclassifiable/attainment for the 8-hour ozone standard and that had a designation of either attainment with an approved maintenance plan or nonattainment for the 1-hour ozone standard, as of the effective date of the area's 8-hour ozone standard designation.

2. What is a 110(a)(1) maintenance plan?

Response: A 110(a)(1) maintenance plan is a plan required under Section 110(a)(1) of the CAA. This section of the Act requires that each state adopt and submit to EPA within three years after the promulgation of a NAAQS (under section 109) for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard for all areas within the state. The maintenance plan must be submitted to EPA as a state implementation plan (SIP) revision.

3. Does this guidance create new requirements for 8-hour ozone maintenance plans?

Response: No. EPA's Phase 1 Implementation Rule established the requirement that certain areas designated unclassifiable/attainment for the 8-hour ozone NAAQS are required to submit a maintenance plan for the 8-hour ozone NAAQS. See 69 FR 23951 (April 30, 2004). This guidance is consistent with the requirements established in 110(a)(1) of the CAA and the provisions of EPA's Phase 1 Implementation Rule (40 Code of Federal Regulation (CFR) Section 51.905(a) (3) and (4)). This guidance is designed to provide information regarding how States might fulfill the maintenance plan obligation established by the CAA and EPA's Phase 1 Implementation Rule. This document does not substitute for the CAA or EPA's regulations, nor is it a regulation itself. Thus, it does not impose binding, enforceable requirements on any party. EPA retains the discretion to approve SIPs on a case-by-case basis that may differ from this guidance, but still comply with the statute and regulations. This guidance is a living document and may be revised periodically without public notice.

4. What are the different designation scenarios associated with 8-hour ozone and 1-hour

[1] Early Action Compact (EAC) areas will have a later effective date of designation. If any such areas are initially designated unclassifiable/attainment for the 8-hour NAAQS and are attainment with a maintenance plan areas for the 1-hour NAAQS, they will be required to submit a section 110(a)(1) maintenance plan no later than 3 years after the effective date of the area's 8-hour attainment designation.

ozone area designations?

Response: As of the effective date of the 8-hour ozone designations, there are six different scenarios possible with respect to the two NAAQS and their designation status:

A. Areas that are designated unclassifiable/attainment for the 8-hour ozone NAAQS and are designated unclassifiable/attainment for the 1-hour ozone NAAQS (8UA/1UA)

B. Areas that are designated unclassifiable/attainment for the 8-hour ozone NAAQS and are designated nonattainment for the 1-hour ozone NAAQS. (8UA/1N)

C. Areas that are designated unclassifiable/attainment for the 8-hour ozone NAAQS and are designated attainment for the 1-hour ozone NAAQS with an approved maintenance plan. (8UA/1M)

D. Areas that are designated nonattainment for the 8-hour ozone NAAQS and are designated unclassifiable/attainment for the 1-hour ozone NAAQS. (8N/1UA)

E. Areas that are designated nonattainment for the 8-hour ozone NAAQS and are designated nonattainment for the 1-hour ozone NAAQS. (8N/1N)

F. Areas that are designated nonattainment for the 8-hour ozone NAAQS and are designated attainment for the 1-hour ozone NAAQS with an approved maintenance plan. (8N/1M)

Table 1 summarizes the 6 scenarios.

Table 1 - Designation Status of 8-hour Ozone Areas

		1-hour ozone		
		Unclassifiable/ Attainment	Nonattainment	Attainment with a maintenance plan
8-hour ozone	Unclassifiable/ Attainment	Scenario A (8UA/1UA)	Scenario B (8UA/1N)	Scenario C (8UA/1M)
	Nonattainment	Scenario D (8N/1UA)	Scenario E (8N/1N)	Scenario F (8N/1M)

5. Which designation scenarios are addressed in this guidance?

Response: This guidance only addresses areas that fall under scenarios B and C from Table 1: areas that are designated as unclassifiable/attainment for the 8-hour ozone standard and are either nonattainment for the 1-hour standard (scenario B) or are designated attainment with a 175A maintenance plan for the 1-hour ozone standard (scenario C). Table 2 lists the specific scenario B and C areas that are subject to this guidance.

Timing

6. When must a 110(a)(1) maintenance plan for scenario B and C be submitted to EPA?

Response: Under 40 CFR 51.905(a)(3) and (4), States must submit section 110(a)(1) maintenance plans no later than 3 years after the effective date of the area's 8-hour ozone NAAQS designation. For most areas, June 15, 2004, is the effective date of the 8-hour ozone NAAQS designations. Thus, for these areas, the section 110(a)(1) 8-hour ozone maintenance plan must be submitted no later than June 15, 2007.

If the State wishes to revise its existing 1-hour ozone SIP for a scenario B or C area, prior to 3 years after designation, the revision would have to meet sections 110(l) and 193 of the Act. The EPA strongly recommends that the revision be incorporated into a 110(a)(1) maintenance plan that is submitted as part of that revision. Also note that 40 CFR 51.905(e)(1) requires approval of a section 110(a)(1) plan if the State wishes to make either of the following SIP revisions: (a) removing the obligation to submit a maintenance plan for the 1-hour NAAQS 8 years after approval of the initial 1-hour maintenance plan; or (b) removing the obligation to implement contingency measures upon a violation of the 1-hour NAAQS. Please note that scenario C areas that are subject to 175A maintenance plan requirements are still subject to those requirements for as long as those requirements remain a part of the approved SIP.

Maintenance Plan Components

7. What are the components of a 110(a)(1) maintenance plan for scenario B and C areas?

Response: The 8-hour ozone 110(a)(1) maintenance plan constitutes a SIP revision and must provide for continued maintenance of the 8-hour ozone NAAQS in the area for 10 years from the effective date of the area's designation as unclassifiable/attainment for the 8-hour ozone NAAQS. At a minimum, the maintenance plan for scenario B and C areas must include the five following components[2]:

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[2] A projection of emissions and demonstration of maintenance for 10 years is not required for any affected area if there are essentially no anthropogenic emissions in the nonattainment area. It would be absurd to have a maintenance plan with contingency measures for such an area. In addition, such an area would obviously not result in contributions to downwind nonattainment areas.

Attainment Inventory - The attainment inventory should be based on actual "typical summer day" emissions of volatile organic compounds and nitrogen oxides. The Phase 1 Implementation Rule provides that the 10-year maintenance period begins as of the effective date of designation for the 8-hour NAAQS for the area. For purposes of an attainment emissions inventory, the State may use one of any of the three years on which the 8-hour attainment designation was based (i.e., 2001, 2002, and 2003).[3] Because areas are already required to develop an inventory for 2002 under EPA's Consolidated Emissions Reporting Rule (CERR) (40 CFR Part 51, Subpart A, 67 FR 39602, June 10, 2002), we recommend that areas use that year as the attainment emission inventory base year for the section 110(a)(1) maintenance plan.

Maintenance Demonstration - The key element of a maintenance plan is a demonstration of how the area will remain in compliance with the 8-hour ozone standard for the 10 year period following the effective date of designation as unclassifiable/attainment. The end projection year is 10 years from the effective date of the attainment designation. For areas with an effective date of designation for the 8-hour NAAQS of June 15, 2004, the end projection year may be beyond 2014. However, the maintenance plan must project attainment for 2014.

The typical method that areas have used in the past to demonstrate that an area will maintain the 1-hour standard has been to identify the level of ozone precursor emissions in the area which is sufficient to attain the NAAQS and to show that future emissions of ozone precursors will not exceed the attainment levels. To perform this analysis, for the 8-hour maintenance plan the state needs to develop emission inventories for one of the three years used to establish the area's attainment status and for the projection year.

Maintenance may also be demonstrated using other methods, such as modeling. A State should work with the EPA Regional Office to determine whether a specific method for demonstrating maintenance is appropriate.

Ambient Air Quality Monitoring - This guidance provides general guidelines for network modification in the context of section 110(a)(1) maintenance areas that need to be applied in light of exisitng circumstances. Neither States nor EPA should treat these guidelines in ways that create disincentives to monitoring.

The State should continue to operate air quality monitors in accordance with 40 CFR 58 to verify maintenance of the 8-hour ozone standard in the area. Any modification to the ambient air monitoring network, such as removal of duplicative or unnecessary monitors, should be accomplished through close consultation with the EPA Regional office.

Proposed network modifications should be accompanied by technical and statistical analysis sufficient to document a given monitor may be removed because it is unnecessary or duplicative

[3] Because EAC areas will have a later effective date of designation, a later year (e.g. 2005, 2006 or 2007) would be used for the purposes of an emissions inventory.

in the case of network reductions or to justify the value of investing in monitoring network enhancements. For purposes of this guidance, duplicative means monitoring for the same purpose and objective. A monitor may be unnecessary when it monitored a violation of the 8-hour standard prior to the latest five complete three-year periods but has monitored attainment for the latest five complete three-year periods. [4,5] If the monitor is violating for this period, we recommend that the monitoring site be retained. This time period is necessary to confirm that several non-overlapping data periods[6] show sustained clean air due to strategic emission reductions rather than favorable meteorology.

In accordance with 40 CFR 58, the final network design will be subject to the approval of the Regional Administrator.

Contingency Plan - The State must develop a contingency plan that, at a minimum, will ensure that any violation of the 8-hour ozone NAAQS is promptly corrected. More details regarding the contingency plan are provided in question 11 below. Additional information on contingency measures can also be obtained from the EPA Office of Air Quality Planning and Standards (OAQPS) and the EPA policy *Procedures for Processing Requests to Redesignate Areas to Attainment* (September 4, 1992 John Calcagni memo to Air Directors) located at http://www.epa.gov/ttncaaa1/t5/meta/m845.html .

Verification of Continued Attainment - The submittal should indicate how the state will track the progress of the maintenance plan. This is necessary due to the fact that emissions projections made for the maintenance demonstration depend on assumptions of point, area and mobile source growth. One option for tracking the progress of the maintenance demonstration, provided here as an example, would be for the State to periodically update the emissions inventory. The maintenance demonstration should project maintenance during the 10-year period following the date of designation for the 8-hour NAAQS, not simply that the area will be in attainment in the 10th year.

States should develop interim emission projection years to show a trend analysis for maintenance of the standard. These emission projections can also be used as triggers for implementing contingency measures. We recognize that it would be difficult and time-consuming to develop projections for each year of the 10-year period. Therefore, the number of interim projection years should reflect whatever information exists regarding the potential for increases in emissions in the intervening years. For instance, if there is a high probability that emissions will decrease over the 10-year period, fewer interim projections are needed; if it is likely that emissions will increase to such an extent as to jeopardize continued maintenance of the standard – even

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[4](i) years 1, 2, and 3; (ii) years 2, 3 and 4; (iii) years 3, 4 and 5; (iv) years 4, 5, and 6; and (v) years 5, 6, and 7).

[5]Of course, the period 2001-2003 would necessarily have to show attainment attainment, since this guidance applies only to areas initially designated attainment for the 8-hour ozone NAAQS using 2001-2003 data.

[6]E.g., period (i) does not have individual years in common with either period (iv) or(v).

temporarily – over the intervening years, the number of interim projection periods should be sufficient to document that such increases will not interfere with maintenance of the 8-hour ozone standard.

If the precursor emissions projections are higher than the baseline inventory, a demonstration using a methodology selected in consultation with the appropriate EPA Regional office would be needed to show that the increase in emissions continues to achieve compliance with the 8-hour ozone NAAQS.

Where the demonstration is based on modeling, an option for tracking progress would be for the State to periodically (typically every three years) reevaluate the modeling assumptions and input data. In any event, the State should monitor the indicators for triggering contingency measures (as discussed in questions 10 and 11).

Conformity

8. Are scenario B and C areas considered "maintenance areas" for purposes of conformity for the 8-hour standard?

Response: No. Conformity for the 8-hour ozone standard does not apply in 8-hour unclassifiable/attainment areas that are subject to the CAA 110(a)(1) maintenance plan requirements. Conformity applies only to areas that are nonattainment or were nonattainment and were then redesignated to attainment subject to the requirement to develop a maintenance plan under 175A of the Act with respect to a particular NAAQS. See CAA section176(c)(5) for conformity applicability requirements; see 40 CFR 93.101 and 93.102 for the definition of "maintenance area" and the applicability regulations for transportation conformity, respectively.

Since scenario B and C areas were never designated nonattainment for the 8-hour standard and are not obligated to develop a maintenance plan under 175A for that standard, they are not subject to the conformity requirements for the 8-hour standard. Conformity for the 1-hour ozone standard will continue to apply in existing 1-hour nonattainment and maintenance areas (including scenario B and C areas) until that standard is revoked. When the 1-hour standard is revoked, conformity will not apply for either ozone standard in scenario B and C areas. See 40 CFR 51.905(e)(3).

Second 10-Year Plan Not Required

9. Are scenario B and C areas required to develop a second 10 year maintenance plan that will apply after the first 10 years?

Response: No. The Phase 1 Implementation Rule only requires a maintenance plan for the first 10 years following designation for the 8-hour standard; it does not require areas to adopt a second 10-year maintenance plan as is required for areas subject to the section 175A maintenance plan

requirement. However, contingency plans approved as part of the 110(a)(1) maintenance plan remain in effect and contingency measures could still be triggered if the area violates the 8-hour standard after the initial 10-year period.

Contingency Measures

10. Do 1-hour controls remain in place for 8-hour unclassifiable/attainment areas?

Response: All control measures approved into the SIP remain in effect unless and until EPA approves a SIP revision removing or modifying such measures. For control measures identified as "applicable requirements" in section 51.900(f) of the regulations, the State may not remove a measure from the SIP, but can request modification of the SIP such that the area is no longer required to implement the measure and that it instead be a contingency measure that would be triggered by a future violation of the 8-hour NAAQS. Any SIP revision requesting removal or modification of a control measure in the approved SIP must include a demonstration (as required by section 110(l) and 193 of the Act) that such removal or modification will not interfere with maintenance of the 8-hour standard or any other applicable requirement of the Act. The Phase 1 Rule provides that before EPA will approve a revision to a SIP removing the obligation to implement a contingency measure upon a violation of the 1-hour standard in scenario B and C areas, the state must first submit the section 110(a)(1) maintenance plan for the 8-hour NAAQS. See 40 CFR 51.905 (e)(1).

See the 110(l) guidance document and 40 CFR 51.905(c) for more details on requirements for modifying or removing 1-hour controls in 8-hour unclassifiable/attainment areas.

11. What is an 8-hour ozone 110(a)(1) contingency plan?

Response: The Phase 1 Rule requires the section 110(a)(1) maintenance plan for scenario B and C areas to include contingency provisions, as necessary, to promptly correct any violation of the NAAQS that occurs (51.905(a)(3)(iii) and (4) (ii)). The contingency plan should ensure that the contingency measures are adopted expeditiously once they are triggered. Consistent with the manner in which EPA has interpreted the analogous requirements for contingency measures in section 175A, EPA believes that the SIP should contain an enforceable commitment to adopt and implement the contingency measures in a timely fashion once they are triggered. To do so, the plan should clearly identify the measures to be adopted and a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. The schedule for adoption and implementation should be as expeditious as practicable, but no longer than 24 months. The State should also identify specific indicators, or triggers, which will be used to determine when the contingency measures need to be adopted and implemented.

The trigger for implementation of contingency measures should, at a minimum, be upon a monitored violation of 8-hour ozone NAAQS. Another recommended trigger is when the area exceeds the precursor emission levels upon which maintenance is based. Because the State may

need to adopt as well as implement the contingency measures and such action could take some time, we recommend that the State consider a trigger that would occur prior to a violation of the NAAQS. Early triggers could avoid violations of the NAAQS, thus ensuring citizens are not exposed to unhealthy levels of air pollution and also eliminating the potential for redesignation to nonattainment based upon a violation of the NAAQS.

Table 2

1-hour Ozone Nonattainment/Maintenance Counties where at least a portion of the county was designated unclassifiable/attainment for the 8-hour standard as of June 15, 2004.
Listed by Region, State, Areas and County
With Classification, Nonattainment/Maintenance Status, P=Part, Part County Description, Rural Transport (RT)

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
Region 1				
NEW HAMPSHIRE	NH Hillsborough Co P	Mont Vernon Town, Wilton Town	Boston-Lawrence-Worcester (E. MA), MA-NH	Serious Nonattainment
	NH Hillsborough Co P	Includes only the following cities and towns: Antrim Town, Bennington Town, Deering Town, Francestown Town, Greenfield Town, Greenville Town, Hancock Town, Hillsborough Town, Lyndeborough Town, Mason Town, New Boston Town, New Ipswich Town, Peterborough Town, Sharon Town, Temple Town, Weare Town, Windsor Town	Manchester, NH	Marginal Nonattainment
	NH Merrimack Co P	The entire county except the following town: Hooksett		
	NH Rockingham Co P	Includes only the following cities and towns: Deerfield Town, Northwood Town, Nottingham Town		
	NH Strafford Co P	The entire county except the following cities and towns: Dover, Durham, Rochester, Rollinsford, and Somersworth	Portsmouth-Dover-Rochester, NH	Serious Nonattainment

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	Cheshire Co, NH Incomplete Data Nonattainment	NH Cheshire Co	NH Cheshire Co	Incomplete Data Nonattainment
MAINE	ME Hancock Co P	Entire county excluding the following cities and towns: Bar Harbor, Blue Hill, Brooklin, Brooksville, Cranberry Isles, Deer Isle, Frenchboro, Gouldsboro, Hancock, Lamoine, Mount Desert, Sedgwick, Sorrento, Southwest Harbor, Stonington, Sullivan, Surry, Swans Island, Tremont, Trenton, and Winter Harbor	Hancock & Waldo Cos, ME	Marginal Maintenance
	ME Waldo Co P	Entire county excluding the following town):Islesboro		
	ME Knox Co P	Entire county excluding the following cities and towns: Camden, Criehaven, Cushing, Friendship, Isle au Haut, Matinicus Isle, Muscle Ridge Shoals, North Haven, Owls Head, Rockland, Rockport, St. George, South Thomaston, Thomaston, Vinalhaven, and Warren	Knox & Lincoln Co.s, ME	Moderate Nonattainment
	ME Lincoln Co P	Entire county excluding the following cities and towns: Alna, Boothbay, Boothbay Harbor, Breman, Bristol, Damariscotta, Dresden, Edgecomb, Monhegan, Newcastle, Nobleboro, South Bristol, Southport, Waldoboro, Westport, and Wiscasset		
	ME Androscoggin Co P	Entire county excluding the following town: Durham	Lewiston-Auburn, ME	Moderate Nonattainment

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	ME Cumberland Co P	Entire county excluding the following cities and towns: Brunswick, Cape Elizabeth, Casco, Cumberland, Falmouth, Freeport, Frye Island, Gorham, Gray, Harpswell, Long Island, New Gloucester, North Yarmouth, Portland, Pownal, Raymond, Scarborough, South Portland, Standish, Westbrook, Windham, and Yarmouth	Portland, ME	Moderate Nonattainment
	ME York Co P	Entire county excluding the following cities and towns: Alfred, Arundel, Berwick, Biddeford, Buxton, Dayton, Elliot, Hollis, Kennebunk, Kennebunkport, Kittery, Limington, Lyman, North Berwick, Ogunquit, Old Orchard Beach, Saco, Sanford, South Berwick, Wells, and York		
Region 3				
PENNSYLVANIA	PA Somerset Co	PA Somerset Co	Johnstown, PA	Marginal Nonattainment
	PA Columbia Co	PA Columbia Co	Scranton-Wilkes-Barre, PA	Marginal Nonattainment
	PA Crawford Co	PA Crawford Co	Crawford Co, PA	Incomplete Data Nonattainment
	PA Juniata Co	PA Juniata Co	Juniata Co, PA	Incomplete Data Nonattainment
	PA Lawrence Co	PA Lawrence Co	Lawrence Co, PA	Incomplete Data Nonattainment
	PA Northumberland Co	PA Northumberland Co	Northumberland Co, PA	Incomplete Data Nonattainment

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	PA Pike Co	PA Pike Co	Pike Co, PA	Incomplete Data Nonattainment
	PA Schuylkill Co	PA Schuylkill Co	Schuylkill Co, PA	Incomplete Data Nonattainment
	PA Snyder Co	PA Snyder Co	Snyder Co, PA	Incomplete Data Nonattainment
	PA Susquehanna Co	PA Susquehanna Co	Susquehanna Co, PA	Incomplete Data Nonattainment
	PA Warren Co	PA Warren Co	Warren Co, PA	Incomplete Data Nonattainment
	PA Wayne Co	PA Wayne Co	Wayne Co, PA	Incomplete Data Nonattainment
VIRGINIA	VA Smyth Co	The portion of White Top Mountain above the 4,500 feet elevation in Smyth county.	Smyth Co, VA (White Top Mtn)	Marginal RT Nonattainment
WEST VIRGINIA	WV Greenbrier Co	WV Greenbrier Co	Greenbrier Co, WV	Marginal Maintenance
Region 4				
FLORIDA	FL Duval Co	FL Duval Co	Jacksonville, FL	Section 185A Maintenance

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	FL Broward Co	FL Broward Co	Miami-Fort Lauderdale-W. Palm Beach, FL	Moderate Maintenance
	FL Miami-Dade Co	FL Miami-Dade Co		
	FL Palm Beach Co	FL Palm Beach Co		
	FL Hillsborough Co	FL Hillsborough Co	Tampa-St. Petersburg-Clearwater, FL	Marginal Maintenance
	FL Pinellas Co	FL Pinellas Co		
KENTUCKY	KY Greenup Co P	The area bounded as follows: Beginning at a point where the Ohio River meets the Greenup-Boyd County Line; proceeding southwest along the Greenup-Boyd County Line to the junction of the East Fork of the Little Sandy River and the Greenup-Boyd County Line; proceeding north and west along the East Fork of the Little Sandy River to the confluence of the Little Sandy River; proceeding north along the Little Sandy River to the confluence of the Ohio River;proceeding east along the Ohio River to the beginning.	Huntington-Ashland, WV-KY	Moderate Maintenance
	KY Fayette Co	KY Fayette Co	Lexington-Fayette, KY	Marginal Maintenance
	KY Scott Co	KY Scott Co		
	KY Daviess Co	KY Daviess Co	Owensboro, KY	Marginal Maintenance

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	KY Hancock Co P	The area bounded as follows: Beginning at the Intersection of U.S. 60 and the Hancock-Daviess County Line; proceeding east along U.S. 60 to the intersection of Yellow Creek and U.S. 60; proceeding north and west along Yellow Creek to the confluence of the Ohio River; proceeding west along the Ohio River to the confluence of Blackford Creek; proceeding south and east along Blackford Creek to the beginning.		
	KY Edmonson Co	KY Edmonson Co	Edmonson Co, KY	Marginal RT Maintenance
	KY Livingston Co P	The area bounded as follows: Beginning at the point where the Marshall, McCracken, and Livingston County Lines meet; proceeding due north to the Ohio River; proceeding east along the Ohio River and that part of the Livingston County Line to the northern most point of Cumberland Island and then south to the point of confluence of the Cumberland River; proceeding east on the Cumberland River to the intersection of U.S. 60 and the Cumberland River; proceeding north on U.S. 60 to the junction of Joe Grimmet Road and U.S. 60; proceeding to the end of Joe Grimmet Road and extending a line from that point to the junction of U.S. 70 and Heater Store Road; proceeding south along Heater Store Road to the intersection of Ky 1889 and Heater Store Road; proceeding south on Harvey Road to the junction of Ky 453 and Harvey Road; proceeding west on Ky 453 to the junction of Haddox Road and Ky 453; proceeding south along Haddox Road to the Tennessee River (at Haddox Ferry); proceeding west on the Tennessee River to the beginning	Paducah, KY	Marginal Maintenance

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
SOUTH CAROLINA	SC Cherokee Co	SC Cherokee Co	Cherokee Co, SC	Marginal Maintenance
Region 5				
MICHIGAN	MI Bay Co	MI Bay Co	Saginaw-Bay City-Midland, MI	Incomplete Data Maintenance
	MI Midland Co	MI Midland Co		
	MI Saginaw Co	MI Saginaw Co		
OHIO	OH Preble Co	OH Preble Co	Preble Co, OH	Section 185A Maintenance
WISCONSIN	WI Walworth Co	WI Walworth Co	Walworth Co, WI	Marginal Maintenance
Region 6				
LOUISIANA	LA Lafayette Par	LA Lafayette Par	Lafayette, LA	Section 185A Maintenance
	LA Calcasieu Par	LA Calcasieu Par	Lake Charles, LA	Marginal Maintenance
	LA Jefferson Par	LA Jefferson Par	New Orleans, LA	Section 185A Maintenance
	LA Orleans Par	LA Orleans Par		
	LA St Bernard Par	LA St Bernard Par		
	LA St Charles Par	LA St Charles Par		
	LA Beauregard Par	LA Beauregard Par	Beauregard Par, LA	Incomplete Data Maintenance

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	LA Grant Par	LA Grant Par	Grant Par, LA	Incomplete Data Maintenance
	LA Lafourche Par	LA Lafourche Par	LaFourche Par, LA	Incomplete Data Maintenance
	LA Pointe Coupee Par	LA Pointe Coupee Par	Pointe Coupee Parish, LA	Incomplete Data Maintenance
	LA St James Par	LA St James Par	St James Par, LA	Incomplete Data Maintenance
	LA St Mary Par	LA St Mary Par	St Mary Par, LA	Incomplete Data Maintenance
NEW MEXICO	NM Dona Ana Co P	Dona Ana Co The area bounded by the New Mexico-Texas State line on the east, the New Mexico-Mexico international line on the south, the Range 3E-Range 2E line on the west, and the N3200 latitude line on the north.	Sunland Park, NM	(New Area 1995) Marginal Nonattainment
TEXAS	TX El Paso Co	TX El Paso Co	El Paso, TX	Serious Nonattainment
	TX Victoria Co	TX Victoria Co	Victoria, TX	Incomplete Data Maintenance
Region 7				
KANSAS and MISSOURI	KS Johnson Co	KS Johnson Co	Kansas City, MO-KS	Other Maintenance
	KS Wyandotte Co	KS Wyandotte Co		

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	MO Clay Co	MO Clay Co		
	MO Jackson Co	MO Jackson Co		
	MO Platte Co	MO Platte Co		
Region 8				
UTAH	UT Davis Co	UT Davis Co	Salt Lake City, UT	Moderate Maintenance
	UT Salt Lake Co	UT Salt Lake Co		
Region 9				
ARIZONA	AZ Maricopa Co P	Gila River Indian tribe area	Phoenix, AZ	Serious Nonattainment
CALIFORNIA	CA Kern Co P	Indian Wells Valley planning area: That portion of Kern County contained within Hydrologic Unit #18090205. (redesignated to attainment/maintenance on 06/21/04)	East Kern Co, CA	Serious Nonattainment on June 15, 2004
	CA Monterey Co	CA Monterey Co	Monterey Bay, CA	Moderate Maintenance
	CA San Benito Co	CA San Benito Co		
	CA Santa Cruz Co	CA Santa Cruz Co		

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	CA San Diego Co P	That portion of San Diego County that includes the areas listed below: La Posta Areas #1 and #2 Cuyapaipe Area Manzanita Area Campo Areas #1 and #2 The boundaries for these designated areas are based on coordinates of latitude and longitude derived from EPA Region 9's GIS database and are illustrated in a map entitled "Eastern San Diego County Attainment Areas for the 8-Hour Ozone NAAQS," dated March 9, 2004, including an attached set of coordinates. The map and attached set of coordinates are available at EPA's Region 9 Air Division office. The designated areas roughly approximate the boundaries of the reservations for these tribes, but their inclusion in this table is intended for CAA planning purposes only and is not intended to be a federal determination of the exact boundaries of the reservations. Also, the specific listing of these tribes in this table does not confer, deny, or withdraw Federal recognition of any of the tribes so listed nor any of the tribes not listed.	San Diego, CA	Serious Maintenance
	CA Santa Barbara Co	CA Santa Barbara Co	Santa Barbara-Santa Maria-Lompoc, CA	Serious Maintenance
	CA Sutter Co P	Excluding that portion of the Sutter Buttes mountain range at or above 2,000 feet in elevation.	Yuba City, CA	Section 185A Nonattainment
	CA Yuba Co	CA Yuba Co		
NEVADA	NV Washoe Co	NV Washoe Co	Reno, NV	Marginal Nonattainment
Region 10				

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
OREGON	OR Marion Co P	OR Marion Co P	Salem, OR	Incomplete Data Nonattainment
	OR Polk Co P	OR Polk Co P		
	Salem Area Transportation Study	Salem Area Transportation Study		

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
WASHINGTON	WA King Co P	The following boundary includes all of Pierce County, and all of King County except a small portion on the northeast corner and the western portion of Snohomish County: Starting at the mouth of the Nisqually river extend northwesterly along the Pierce County line to the southernmost point of the west county line of King County; thence northerly along the county line to the southernmost point of the west county line of Snohomish County; thence northerly along the county line to the intersection with SR 532; thence easterly along the north line of SR 532 to the intersection of I-5, continuing east along the same road now identified as Henning Rd, to the intersection with SR 9 at Bryant; thence continuing easterly on Bryant East Rd. and Rock Creek Rd., also identified as Grandview Rd., approximately 3 miles to the point at which it is crossed by the existing BPA electrical transmission line; thence southeasterly along the BPA transmission line approximately 8 miles to point of the crossing of the south fork of the Stillaguamish River; thence continuing in a south-easterly direction in a meander line following the bed of the River to Jordan Road; southerly along Jordan Road to the north city limits of Granite Falls; thence following the north and east city limits to 92nd St. N.E. and Menzel Lake Rd.; thence south-southeasterly along the Menzel Lake Rd. and the Lake Roesiger Rd. a distance of approximately 6 miles to the northernmost point of Lake Roesiger; thence southerly along a meander line following the middle of the Lake and Roesiger Creek to Woods Creek; thence southerly along a meander line following the bed of the Creek approximately 6 miles to the point the Creek is crossed by the existing BPA electrical transmission line; thence easterly along the BPA transmission line approximately 0.2 miles; thence southerly along the BPA Chief Joseph-Covington electrical transmission line approximately 3 miles to the north line of SR 2; thence southeasterly along SR 2 to the intersection with the east county line of King county; thence south along the county line to the northernmost point of the east county line of Pierce County; thence along the county line to the point of beginning at the mouth of the Nisqually River.	Seattle-Tacoma, WA	Marginal Maintenance
	WA Pierce Co	WA Pierce Co		

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	WA Snohomish Co P	Snohomish Co The following boundary includes all of Pierce County, and all of King County except a small portion on the northeast corner and the western portion of Snohomish County: Starting at the mouth of the Nisqually river extend northwesterly along the Pierce County line to the southernmost point of the west county line of King County; thence northerly along the county line to the southernmost point of the west county line of Snohomish County; thence northerly along the county line to the intersection with SR 532; thence easterly along the north line of SR 532 to the intersection of I-5, continuing east along the same road now identified as Henning Rd, to the intersection with SR 9 at Bryant; thence continuing easterly on Bryant East Rd. and Rock Creek Rd., also identified as Grandview Rd., approximately 3 miles to the point at which it is crossed by the existing BPA electrical transmission line; thence southeasterly along the BPA transmission line approximately 8 miles to point of the crossing of the south fork of the Stillaguamish River; thence continuing in a south-easterly direction in a meander line following the bed of the River to Jordan Road; southerly along Jordan Road to the north city limits of Granite Falls; thence following the north and east city limits to 92nd St. N.E. and Menzel Lake Rd.; thence south-southeasterly along the Menzel Lake Rd. and the Lake Roesiger Rd. a distance of approximately 6 miles to the northernmost point of Lake Roesiger; thence southerly along a meander line following the middle of the Lake and Roesiger Creek to Woods Creek; thence southerly along a meander line following the bed of the Creek approximately 6 miles to the point the Creek is crossed by the existing BPA electrical transmission line; thence easterly along the BPA transmission line approximately 0.2 miles; thence southerly along the BPA Chief Joseph-Covington electrical transmission line approximately 3 miles to the north line of SR 2; thence southeasterly along SR 2 to the intersection with the east county line of King county; thence south along the county line to the northernmost point of the east county line of Pierce County; thence along the county line to the point of beginning at the mouth of the Nisqually River.		
OREGON and WASHINGTON	OR Clackamas Co P	OR Clackamas Co P	Portland-Vancouver AQMA, OR-WA	Marginal Maintenance
	OR Multnomah Co P	OR Multnomah Co P		

Region/State	8- Hour Ozone Unclassifiable/Attainment Areas		1-hour Designation Data	
	8-hour Attainment Area	8-hour Attainment Area Counties/Cities/Towns	1-Hour Area	Designation Status
	OR Washington Co P	OR Washington Co P		
	WA Clark Co P	WA Clark Co P		
	Air Quality Maintenance Area	Air Quality Maintenance Area		