The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions for the Attainment and Maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, 1-Hour Ozone National Ambient Air Quality Standard, and Fine Particulate Matter National Ambient Air Quality Standard; and the 2002 Periodic Emission Inventory

May 2006

Preface

This document includes revisions to several State Implementation Plans (SIP) that cover the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Annual Fine Particulate Matter National Ambient Air Quality Standard. In addition, the 2002 Periodic Emission Inventory is being submitted.

Specifically, SIP revisions include updated carbon monoxide and ozone budgets for northern New Jersey for transportation conformity purposes that incorporate updated planning assumptions; a revised general conformity emission budget for McGuire Air Force Base to ensure that increases in activity at the McGuire Air Force Base conform with the ozone SIP; a fine particulate matter, $PM_{2.5,}$ transportation conformity budget for northern New Jersey for the interim period prior to the $PM_{2.5}$ attainment demonstration SIP; a carbon monoxide limited maintenance plan for Camden County and the nine not-classified areas for the second ten-year compliance period; and the 2002 periodic emission inventory.

Acknowledgments

The New Jersey Department of Environmental Protection acknowledges the efforts and assistance of the many agencies and individuals whose contributions were instrumental in the preparation of this State Implementation Plan Revision. In particular, the New Jersey Department of Environmental Protection wishes to acknowledge the many individuals within the New Jersey Department of Transportation, the United States Environmental Protection Agency Region 2, and the North Jersey Transportation Planning Authority, the Delaware Valley Regional Planning Commission, and as well as staff within the New Jersey Department of Environmental Protection for their assistance and guidance.

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*** Note: These appendices and attachments are only available electronically.**

Acronyms and Abbreviations

AADF	Annual Activity Day Factors
CFR	Code of Federal Regulations
CNG	Compressed Natural Gas
DVMT	Daily Vehicle Miles Traveled
EDMS	Emissions and Dispersion Modeling System
EWR	Newark Liberty International Airport
FMVCP	Federal Motor Vehicle Control Program
FR	Federal Register
GSE	Ground Support Equipment
HDDV	Heavy Duty Diesel Vehicles
I/M	Inspection and Maintenance
LDGT	Light Duty Gasoline Trucks
LDGV	Light Duty Gasoline Vehicle
LPG	Liquefied Petroleum Gas
LTO	Landing and Take-off Operations
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NH_3	Ammonia
NJDEP	New Jersey Department of Environmental Protection
NJR	New Jersey Register
NLEV	National Low Emission Vehicle
NNEM	NONROAD Emission Model
NO_x	Oxides of Nitrogen
$PM_{2.5}$	Fine Particulate Matter (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers)
PM_{10}	Particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PPSUITE	Performance Evaluation and Emissions Analysis
P.L.	Public Law
RACT	Reasonably Available Control Technology
RFG	Reformulated Gasoline
RVP	Reid Vapor Pressure
SCC	Source Classification Code
SIP	State Implementation Plan
SMOKE	Sparse Matrix Operator Kernel Emissions
SO_2	Sulfur Dioxide
SO_x	Oxides of Sulfur
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Executive Summary

The State of New Jersey has revised its State Implementation Plans (SIPs) governing the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, ozone, and fine particulate matter. Specifically, this SIP revision includes the following:

- Revised transportation conformity emission budgets consisting of a 1-Hour Ozone and Carbon Monoxide Budget for Northern New Jersey and an amendment to the McGuire Air Force Base General Conformity Budget;
- New transportation conformity emission budgets consisting of a Fine Particulate Matter Budget for Northern New Jersey;
- The second ten-year Carbon Monoxide Limited Maintenance Plan for Camden County and the nine not classified maintenance areas; and,
- New Jersey's 2002 periodic emission inventory.

1-Hour Ozone 2005/2007 Budgets and Carbon Monoxide 2007/2014 Budgets for Northern New Jersey:

New Jersey has updated volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) transportation conformity emission budgets that incorporate new data that will be required for use in future conformity determinations for New Jersey. The budgets were updated because of significant changes in planning assumptions involving vehicle miles traveled predictions, vehicle age distributions, and the latest allocation of vehicle miles traveled to the various vehicle types in the North Jersey Transportation Planning Authority area. An analysis was performed that compares these updated budgets to the budgets that represented the attainment demonstration for the 1-hour ozone standard. This analysis demonstrates that the updated budgets continue to support predicted achievement of rate of progress and projected attainment of the 1-hour ozone NAAQS for the New Jersey portion of the New York City/Northern New Jersey/Long Island nonattainment area by the attainment date of 2007.

All 21 New Jersey counties are designated as moderate nonattainment for the 8-hour ozone NAAQS by the United States Environmental Protection Agency (USEPA). The 1-hour ozone NAAQS was revoked on June 15, 2005. The attainment demonstration SIP for the 8-hour ozone NAAQS is not due until June 2007. The USEPA has established that prior to the establishment of 8-hour budgets, the use of 1-hour budgets ensures that air quality progress to date is maintained. The USEPA also contends that even after the 1-hour NAAQS was revoked, the 1-hour budgets continue to be part of a nonattainment area's SIP and are therefore appropriate to use as proxies for the 8-hour standard.[1]

The updated transportation conformity emission budgets are provided in Table ES1. Table ES2 contains a comparison of the updated transportation conformity emission budgets with prior

[1] Transportation Conformity Rule Amendments for the New 8-Hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes; Final Rule, 69 Fed. Reg., 40026-40027 (July 1, 2004).

budgets. The updated budgets supersede the prior budgets and must be used for future transportation conformity determinations by the North Jersey Transportation Planning Authority Metropolitan Planning Organization once approved by the USEPA.

Table ES1
Updated Carbon Monoxide and 1-Hour Ozone
Transportation Conformity Emission Budgets

Transportation Planning Area	Carbon Monoxide Emissions[(1)] (tons per winter day)			VOC Emissions[(2)] (tons per ozone day)		NO_x Emissions[(2)] (tons per ozone day)	
	1997	2007	2014	2005	2007	2005	2007
North Jersey Transportation Planning Authority	1,550.74	1,150.99	899.01	146.33	122.53	327.83	256.58

NOTES:
(1) For Passaic, Bergen, Essex, Hudson and Union counties.
(2) For all counties within the Metropolitan Planning Organization.

Table ES2
Comparison of the Updated Carbon Monoxide and 1-Hour Ozone
Transportation Conformity Emission Budgets with Prior Budgets

Transportation Planning Area	Prior or Updated	Carbon Monoxide Emissions[(1)] (tons per winter day)			VOC Emissions[(2)] (tons per ozone day)		NO_x Emissions[(2)] (tons per ozone day)	
		1997	2007	2014	2005	2007	2005	2007
North Jersey Transportation Planning Authority	Prior	1,550.74	783.39	605.63	148.27	125.82	253.05	198.34
	Updated	Not Updated	1,150.99	899.01	146.33	122.53	327.83	256.58

NOTES:
(1) For Passaic, Bergen, Essex, Hudson and Union counties.
(2) For all counties within the Metropolitan Planning Organization.

Transportation conformity emission budgets for carbon monoxide are updated to include a safety margin but were not recalculated to include the latest planning assumptions. This SIP revision does not affect any of the planned or implemented control measures for carbon monoxide, VOCs, and NO_x. In addition, the updated budgets do not result in backsliding on New Jersey's plans to address the 1-hour ozone NAAQS and maintain attainment of the carbon monoxide standard.

The carbon monoxide budgets were updated to incorporate the "margin of safety" provisions of the USEPA's transportation conformity rule[2]. The safety margin is the difference between the attainment year total emissions and future year total emissions. This safety margin was applied to the existing North Jersey Transportation Planning Authority carbon monoxide budgets for 2007 and 2014.

Actual measured carbon monoxide concentrations have been steadily decreasing over the last thirty years as a likely consequence of improvements in motor vehicle emission technology. Onroad mobile sources have historically contributed the largest portion of the carbon monoxide inventory in New Jersey relative to the other source sectors. The last time the carbon monoxide NAAQS was exceeded in New Jersey was in January of 1995. The monitored carbon monoxide levels have trended downward so that the maximum measured values are currently about one-half of the NAAQS level.

The use of the updated budgets for transportation conformity determinations will continue to achieve the goal of the maintenance of the NAAQS for carbon monoxide. The updates to the carbon monoxide budgets do not affect the conclusions of the carbon monoxide maintenance plan for the New Jersey portion of the New York City/Northern New Jersey/Long Island area.

McGuire Air Force Base General Conformity Budget Amendment:

McGuire Air Force Base currently has a 1-hour ozone general conformity budget. As noted previously, the USEPA revoked the 1-hour ozone standard for the nation on June 15, 2005, as the newly established 8-hour ozone standard superseded it. McGuire Air Force Base has agreed to live within its 1-hour ozone budget until such time as a new budget is established under the 8-hour ozone standard, with one condition. McGuire Air Force Base requested that the State allow it to reapportion additional VOC reductions from its VOC budget to its NO_x budget to accommodate anticipated mission changes for the McGuire Air Force Base. Specifically, McGuire Air Force Base proposed to increase its existing NO_x budget by 450 tons per year by decreasing its VOC budget by 468 tons per year. Previously, USEPA approved[3] a similar reapportionment at McGuire Air Force Base in 2003. The VOC/NO_x emission ratio (1.04) was derived from the 1-hour ozone attainment demonstration for the area. Table ES3 contains updated emission budget information for McGuire Air Force Base.

Fine Particulate Matter Transportation Conformity Budget for the New Jersey Portion of the New York/New Jersey/Long Island/Connecticut Nonattainment Area:

New Jersey has established early transportation conformity emission budgets for directly emitted fine particulate matter (direct $PM_{2.5}$) and annual NO_x (a $PM_{2.5}$ precursor) for the New Jersey portion of the New York/New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area. The USEPA is allowing areas to establish early budgets as an alternative to other interim conformity tests prior to submittal of the $PM_{2.5}$ attainment demonstration in April 2008. To establish an early budget, an area must meet certain criteria defined by the USEPA. The New Jersey portion of the New York/New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area meets the

[2] 40 CFR 93.124
[3] 68 Fed. Reg., 43462-43465 (July 23, 2003).

criteria. The use of the budget is expected to be more air quality constraining than the choice of using either of the two other interim conformity tests. Once found to be adequate, these early $PM_{2.5}$ budgets must be used by the Metropolitan Planning Organizations during the interim period prior to the establishment of $PM_{2.5}$ budgets with the $PM_{2.5}$ attainment demonstration SIP.

Table ES3
Emission Budgets for McGuire Air Force Base

	Prior Budget		Updated Budget to Accommodate Additional Aircraft	
	VOC (Tons/Year)	**NO_x (Tons/Year)**	**VOC (Tons/Year)**	**NO_x (Tons/Year)**
1990 Baseline	1,112	1,038	1,112	1,038
1996	1,186	1,107	1,186	1,107
1999	1,223	1,142	1,223	1,142
2002	1,405	875	1,405	875
2005(1)	1,198	1,084	730	1,534

NOTES:
(1) Budgets updated such that the increase in NO_x is offset by a decrease in VOC. Updated 2005 budgets apply to all future years until new budgets are established for the 8- hour ozone attainment demonstration

The early transportation conformity emission budgets are provided in Table ES4. The early budgets must be used for future transportation conformity determinations by the North Jersey Transportation Planning Authority and the Delaware Valley Regional Planning Commission Metropolitan Planning Organization once found to be adequate by the USEPA.

Table ES4
New $PM_{2.5}$ Transportation Conformity Emission Budgets

Transportation Planning Area	Direct $PM_{2.5}$ Emissions[(1)] (tons per year)	Annual NO_x Emissions (tons per year)
	2009	2009
North Jersey Transportation Planning Authority[(2)]	1,207	61,676
Delaware Valley Regional Planning Commission[(3)]	89	4,328

NOTES:
(1) Direct $PM_{2.5}$ consists of the sum of: SO_4, Organic Carbon, Elemental Carbon, particulate Matter from gasoline vehicles, lead, brake particles, and tire particles.
(2) For Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset and Union Counties.
(3) For Mercer County.

Carbon Monoxide Limited Maintenance Plan:

According to 42 U.S.C. §7505a(b) New Jersey has established the second ten-year maintenance plans for ten of its eleven carbon monoxide maintenance areas whose initial maintenance plans expire in 2007. The ten maintenance areas are:

1) **The Camden County Carbon Monoxide Maintenance Area** – covering all of Camden County; and,
2) **The Nine Not-Classified Carbon Monoxide Maintenance Areas** – covering the City of Atlantic City (in Atlantic County), the City of Burlington (in Burlington County), the Borough of Freehold (in Monmouth County), the Town of Morristown (in Morris County), the Borough of Penns Grove (in Salem County), the City of Perth Amboy (in Middlesex County), the Borough of Somerville (in Somerset County), the Toms River Area (in Ocean County), and the City of Trenton (in Mercer County).

In an effort to consolidate the preparation of these second ten-year maintenance plans, the State prepared a consolidated Limited Maintenance Plan encompassing all ten (10) areas, covering the second ten-year maintenance period. New Jersey's eleventh carbon monoxide maintenance area, encompassing four counties and part of a fifth county in the Northeastern portion of the State, has an initial maintenance plan that does not expire until 2014. As such, this area is not required and not able to submit a second ten-year plan until around 2012.

This carbon monoxide Limited Maintenance Plan demonstrates that the New Jersey carbon monoxide maintenance areas continue to be in attainment of the health-based NAAQS for carbon monoxide and will continue to be in attainment for another ten (10) years. In general, monitoring data for these areas show a trend of decreasing carbon monoxide concentrations in

the air over the past decade. These improvements are due to permanent and enforceable measures that the state and federal government have implemented, and not necessarily attributable to favorable meteorology or other factors. Despite the growth in economic activity, vehicle miles traveled, and population that have and are expected to occur, the maintenance areas are expected to meet the health-based carbon monoxide NAAQS through the remainder of the their first ten-tear maintenance plans and all of the second ten-year maintenance plans.

Finally, in compliance with the USEPA's Limited Maintenance Plan Guidance,[4] the emission budgets in these Limited Maintenance Plan areas are now treated as not constraining for purposes of transportation conformity. This is true for the length of the maintenance periods because it is unreasonable to expect that the area would experience so much growth in that period that a violation of the carbon monoxide NAAQS would result. As such, once a Limited Maintenance Plan has been approved for these areas, it will no longer be necessary for the Metropolitan Planning Organizations to perform numerical regional analyses to demonstrate transportation conformity for Transportation Plans and Transportation Improvement Programs. However, project-level carbon monoxide evaluation of transportation projects (project-level conformity) still needs to be performed in areas with approved Limited Maintenance Plans.

2002 Periodic Emission Inventory:

42 U.S.C. §7410(a)(2)(F) requires the submission by states to the USEPA of periodic reports on the nature and amounts of emissions and emissions related data. In 2002, the USEPA promulgated the Consolidated Emission Reporting Rule at 40 CFR 51, Subpart A. As indicated by its name, this rule "consolidated" the various emissions reporting requirements that already had established for existing NAAQS (e.g., ozone (VOC and NO_x), carbon monoxide, etc.) into one location within the Code of Federal Regulations. In addition, the Consolidated Emission Reporting Rule:

1) Established new reporting requirements related to $PM_{2.5}$, its potential precursors (ammonia (NH_3), oxides of sulfur (SO_x), NO_x and VOC), and regional haze;
2) Established new requirements for the statewide reporting of area source and mobile source emissions; and,
3) Required two types of inventories (annual inventories and three year cycle inventories).

New Jersey's 2002 Periodic Emission Inventory meets the new Consolidated Emission Reporting Rule requirements and establishes 2002 as the base year for future attainment planning purposes with respect to 8-hour ozone, $PM_{2.5}$ and regional haze, as required by the USEPA. This inventory is a compilation of the emissions from sources of biogenic (natural) and anthropogenic (human-made) VOC, NO_x, carbon monoxide, particulate matter less than 10 micrometers in diameter (PM_{10}), $PM_{2.5}$, sulfur dioxide (SO_2)[5] and ammonia (NH_3) in the outdoor air. The

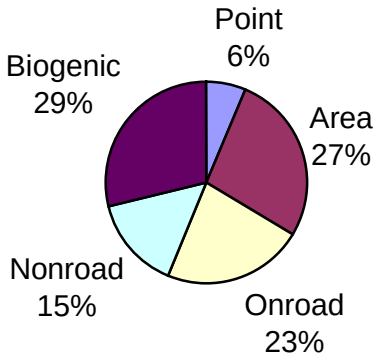
[4] USEPA, Memorandum from Lydia Wegman (OAQPS) to EPA Regional Air Directors, "Limited Maintenance Plan Option for Moderate PM_{10} Nonattainment Areas," August 21, 2001.

[5] SO_2 has been reported in the inventory instead of SO_x as required in the Consolidated Emissions Reporting Rule because the USEPA MOBILE and NON-ROAD models and the majority of USEPA guidance on emission factors is based on SO_2, not SO_x. In addition, the USEPA National Emissions Inventory reports SO_2.

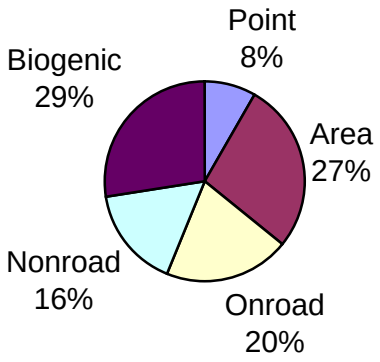
sources are divided into five sectors and each making up one component of the inventory: point sources, area (nonpoint) sources, onroad sources, nonroad sources, and biogenic sources.

The pie charts on the following pages show the major air contaminants estimated within the 2002 Emissions Inventory. As can be seen from these charts, VOC emissions are occurring from all sectors of the inventory with no sector having a much more predominant role than the others. On-Road mobile sources predominate the NO_x and carbon monoxide emissions and point sources predominate the sulfur dioxide emissions. Area sources predominate the releases of ammonia and particulate matter ($PM_{2.5}$ and PM_{10})

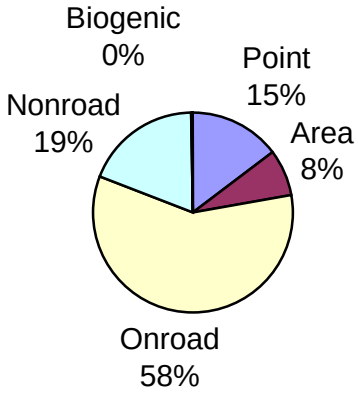
2002 VOC- 470,689 Tons Per Year



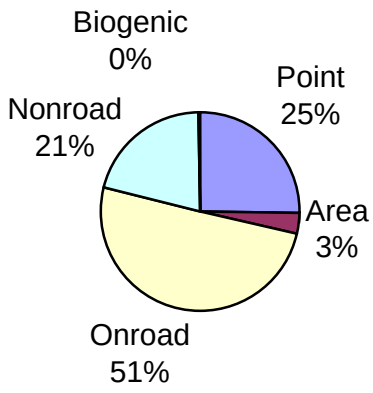
2002 VOC - 1,350 Tons Per Day



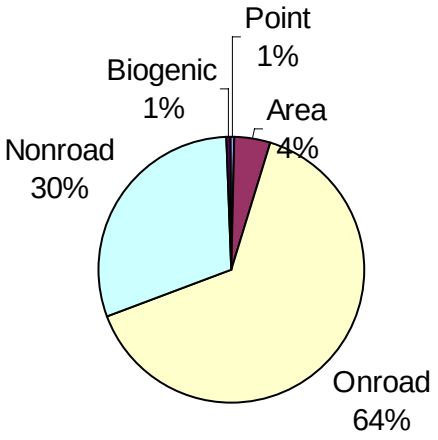
2002 NOx - 352,968 Tons Per Year



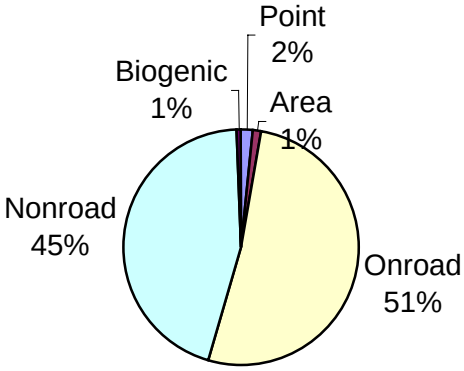
2002 NOx - 1,110 Tons Per Day



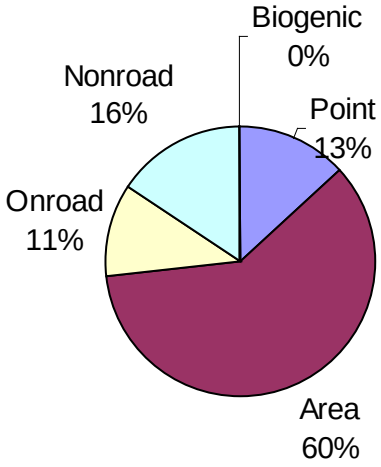
2002 Carbon Monoxide
2,206,719 Tons Per Year



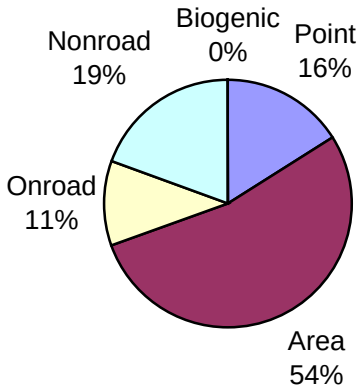
2002 Carbon Monoxide
5,546 Tons Per Day



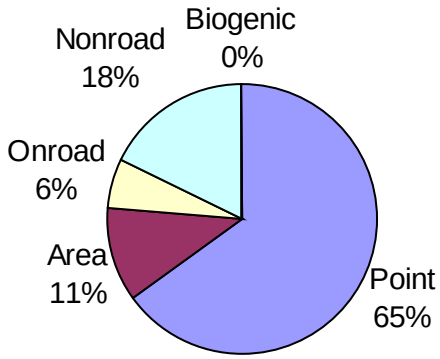
2002 PM10 - 41,538 Tons Per Year



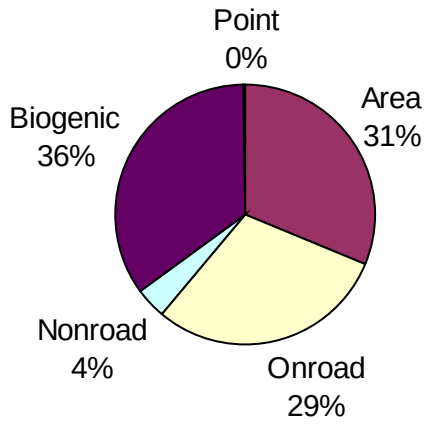
2002 PM 2.5 - 30,381 Tons Per Year



2002 SO2 - 94,672 Tons Per Year



2002 Ammonia
25,514 Tons Per Year



I. Introduction

The Clean Air Act provides for states to submit revisions to their State Implementation Plans (SIP) whenever states' programs are modified from the existing SIP. This document establishes the following revisions to the existing New Jersey SIP:[6]

- Revised transportation conformity emission budgets for ozone and carbon monoxide for northern New Jersey;
- Revised general conformity budget for McGuire Air Force Base;
- New transportation conformity budget for fine particulate matter, $PM_{2.5}$, for northern New Jersey;
- Limited Maintenance Plan for carbon monoxide for Camden County and the nine not-classified areas;
- New Jersey's 2002 Periodic Emission Inventory.

The USEPA requires[7] the 2002 Periodic Emission Inventory to be submitted as a SIP revision because it is the foundation for the planning to attain the 8-hour ozone and fine particulate matter health standards, and for the regional haze SIP.

Summaries of the history of New Jersey's SIPs for carbon monoxide and ozone are presented in Appendix A and Appendix B, respectively.

II. Conformity Emission Budgets

New Jersey updated the existing transportation conformity VOC, NO_x and CO emission budgets and prepared early transportation conformity emission budgets for direct $PM_{2.5}$ and annual NO_x (a $PM_{2.5}$ precursor) for the New Jersey portion of the New York/New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment Area. New Jersey also has updated the existing general conformity budgets for McGuire Air Force Base.

The updates to the transportation conformity emission budgets for VOCs and NO_x reflect the most recent predictions of vehicle miles traveled, vehicle age distributions, and the latest allocation of vehicles miles traveled to the various vehicle types. Updates to the transportation conformity emission budgets for carbon monoxide include a safety margin. These updated budgets do not affect any of the planned or implemented control measures for carbon monoxide, VOCs, or NO_x. In addition, the updated budgets do not result in backsliding on New Jersey's plans to address the 1-hour ozone NAAQS and maintain attainment of the carbon monoxide standard.

Early budgets to address the $PM_{2.5}$ NAAQS are provided for direct $PM_{2.5}$ and annual NO_x for the New Jersey portion of the New York City/Northern New Jersey/Long Island/Connecticut nonattainment area. The attainment demonstration SIP for the $PM_{2.5}$ NAAQS is not due until April 2008. Once found to be adequate, these early $PM_{2.5}$ budgets must be used by the

[6] 42 U.S.C. §7410
[7] 42 U.S.C. §7401

Metropolitan Planning Organizations during the interim period prior to the establishment of $PM_{2.5}$ budgets with the $PM_{2.5}$ attainment demonstration SIP. The USEPA is allowing areas to establish early budgets as an alternative to other interim conformity tests prior to submittal of the $PM_{2.5}$ attainment demonstration in April 2008.

New Jersey has changed the general conformity budget for McGuire Air Force Base based on projected future increases NO_x budget needs. The current and projected VOC emissions at McGuire Air Force Base are well below budget levels. Therefore, this request for an increase in the NO_x budget will be offset by a decrease in their VOC budget.

A. Background

42 U.S.C. §7506 states "no department, agency, or instrumentality of the federal government shall engage in, support in any way, or provide financial assistance for, or approve, any activity which does not conform to an approved or promulgated state implementation plan. No Metropolitan Planning Organization designated under section 134 of Title 23, shall give its approval to any project, program, or plan which does not conform to an approved or promulgated state implementation plan." These requirements are interpreted by the USEPA to apply to maintenance as well as nonattainment areas.[8]

"Conformity to an implementation plan" means conforming to the implementation plan's purpose of eliminating or reducing the severity and number of violations of the health-based NAAQS and achieving expeditious attainment of such standards. In order for a proposed transportation activity to conform to the SIP, the Clean Air Act[9] specifies that such activity will not:

- Cause or contribute to any new violation of any standard in any area;
- Increase the frequency or severity of any existing violation of any standard in any area; or,
- Delay timely attainment of any standard or any required interim emission reductions or any other milestones in any area.

The Federal Transportation Conformity Rule (40 CFR 93.100-160) provides the process by which the air quality impact of transportation plans, transportation improvement programs, and projects will be analyzed. The agency preparing plans (twenty or more years), transportation improvement programs (at least four years), or approving a transportation project must analyze the emissions expected from such a proposal in accordance with the Transportation Conformity Rule.[10]

For the purposes of transportation conformity, the emission budget is that portion of the total

[8] USEPA, Memorandum from John Calcagni, Director, Air Quality Management Division, to Regional Air Directors, "Procedures for Processing Requests to Redesignate Areas to Attainment," September 4, 1992, page 6.
[9] 42 U.S.C. §7506(c)(1)
[10] For New Jersey such plans are prepared by three Metropolitan Planning Organizations (North Jersey Transportation Planning Authority, South Jersey Transportation Planning Organization and Delaware Valley Regional Planning Commission).

allowable emissions in the SIP emission inventory that is allocated to onroad vehicles. The projected emissions from a plan, transportation improvement program, or project, estimated in accordance with the Transportation Conformity Rule, may not exceed the motor vehicle emissions budget contained in the appropriate SIP. Emissions in years for which no motor vehicle emissions budgets are specifically established must be less than or equal to the motor vehicle emissions budget established for the most recent prior year.

B. Revised Budgets

This section discusses the updates to the existing transportation conformity budgets for certain areas within the North Jersey Transportation Planning Authority and the updates to the existing general conformity budgets for McGuire Air Force Base.

1. 1-Hour Ozone and a Carbon Monoxide Budgets for Northern New Jersey

The Metropolitan Planning Organizations are required to use the latest planning assumptions pursuant to the USEPA Transportation Conformity Rule (40 CFR 93.100-160). There are three Metropolitan Planning Organizations in New Jersey, Figure I. The budgets described in this section are for the North Jersey Transportation Planning Authority.

The transportation conformity emission budgets for VOCs and NO_x are updated to reflect the most recent Highway Performance Monitoring System reconciliation of vehicle miles traveled updated (2005), vehicle age distributions, and the latest allocation of vehicle miles traveled to the various vehicle types. The transportation conformity emission budgets for carbon monoxide are updated to include a safety margin and are not updated to include the latest planning assumptions. The budgets do not affect any of the planned or implemented control measures for carbon monoxide, VOCs, and NO_x. In addition, the updated budgets do not indicate a need for any additional control measures for New Jersey to maintain attainment of the carbon monoxide NAAQS or reach attainment of the 1-hour ozone NAAQS. Please note: The attainment demonstration SIP for the 8-hour ozone NAAQS is not due until June 2007. Prior to approval of a SIP for the 8-hour ozone NAAQS, compliance with the 1-hour ozone NAAQS SIP continues to be required with regard to Transportation Conformity.[11]

The updated transportation conformity emission budgets are provided in Table I. Table II contains a comparison of the updated transportation conformity emission budgets with prior budgets. The updated budgets supersede the prior budgets and should be used for future transportation conformity determinations by the North Jersey Transportation Planning Authority once approved by the USEPA.

[11] Transportation Conformity Rule Amendments for the New 8-Hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes; Final Rule, 69 Fed. Reg., 40026-40027 (July 1, 2004).

Figure I

Metropolitan Planning Organizations in New Jersey

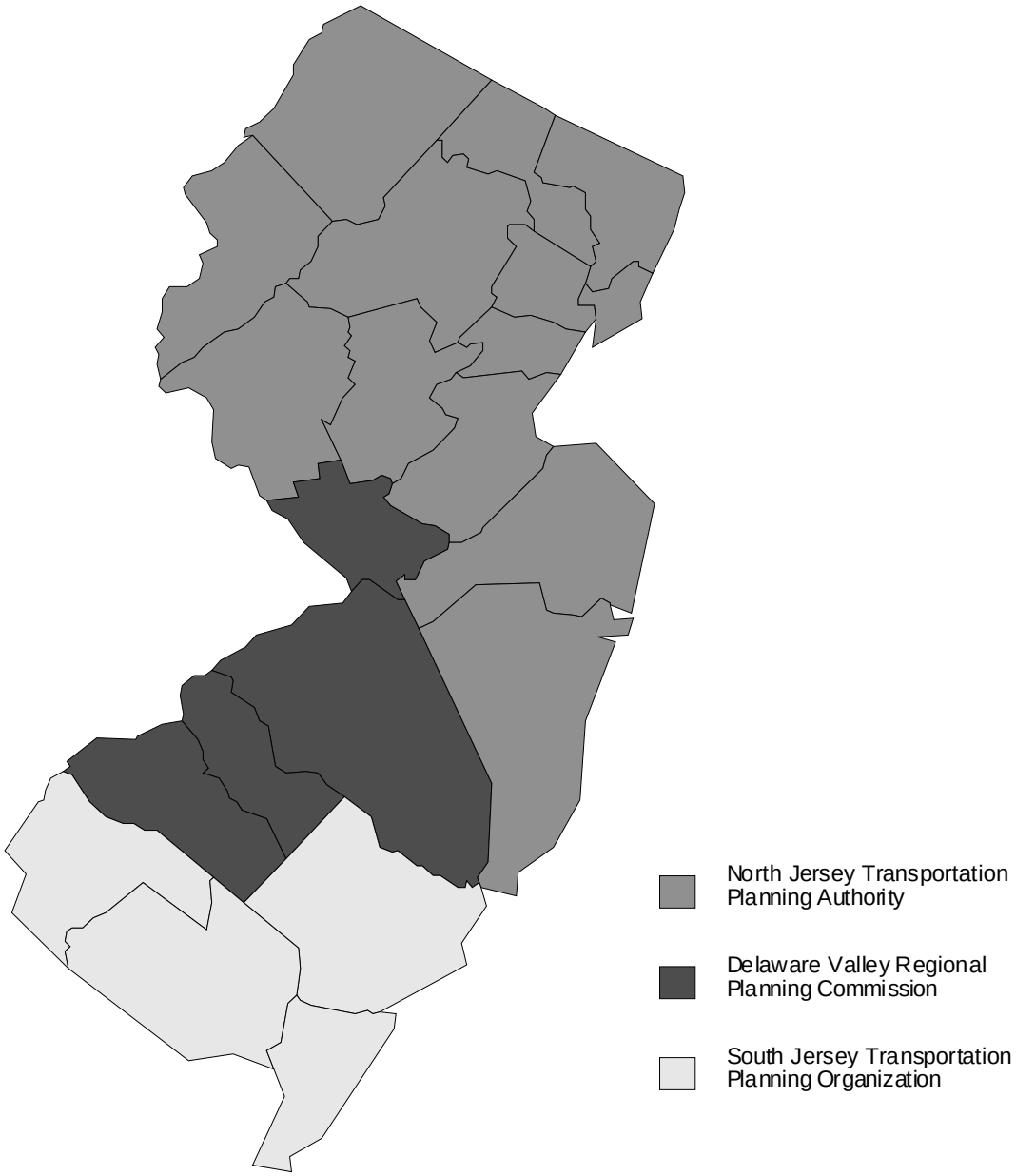


Table I
Updated Transportation Conformity Emission Budgets

Transportation Planning Area	Carbon Monoxide Emissions[1] (tons per winter day)			VOC Emissions[2] (tons per ozone day)		NO_x Emissions[2] (tons per ozone day)	
	1997	2007	2014	2005	2007	2005	2007
North Jersey Transportation Planning Authority	1,550.74	1,150	899	146.33	122.53	327.83	256.58

NOTES:
(1) For Passaic, Bergen, Essex, Hudson and Union counties.
(2) For all counties within the Metropolitan Planning Organization.

Table II
Comparison of the Updated Transportation Conformity Emission Budgets with Prior Budgets

Transportation Planning Area	Prior or Updated	Carbon Monoxide Emissions[1] (tons per winter day)			VOC Emissions[2] (tons per ozone day)		NO_x Emissions[2] (tons per ozone day)	
		1997	2007	2014	2005	2007	2005	2007
North Jersey Transportation Planning Authority	Prior	1,550.74	783.39	605.63	148.27	125.82	253.05	198.34
	Updated[3]	Not Updated	1,150	899	146.33	122.53	327.83	256.58

NOTES:
(1) For Passaic, Bergen, Essex, Hudson and Union counties.
(2) For all counties within the Metropolitan Planning Organization.
(3) Even though a number of the updated budgets are greater that the prior budgets, the maintenance SIP for carbon monoxide continues to demonstrate maintenance of the NAAQS and the attainment SIP for ozone continues to demonstrate attainment of the NAAQS as discussed in the subsequent subsections of the text.

Carbon Monoxide Budgets

The carbon monoxide budgets for the five New Jersey counties in the New York City/Northern New Jersey/Long Island carbon monoxide maintenance area were updated to incorporate the

"margin of safety" provisions of the USEPA's transportation conformity rule.[12] The safety margin is the difference between the attainment year total emissions and future year total emissions. The rule[13] indicates that when the projected emissions from all sources are less than the total emissions that would be consistent with attainment, the SIP may explicitly quantify a safety margin and include some or all of it in the motor vehicle emission budget for purposes of conformity. Table III shows the 1996 attainment emission inventory and future projection emission inventories. Tables I and II include the margins of safety.

Note that even though only the municipalities of Clifton, Passaic, and Paterson in Passaic County are in the maintenance area, the entire Passaic County is included in the area budget because this is how prior budgets were established. These inventories are from the 2002 USEPA approved maintenance plan.[14]

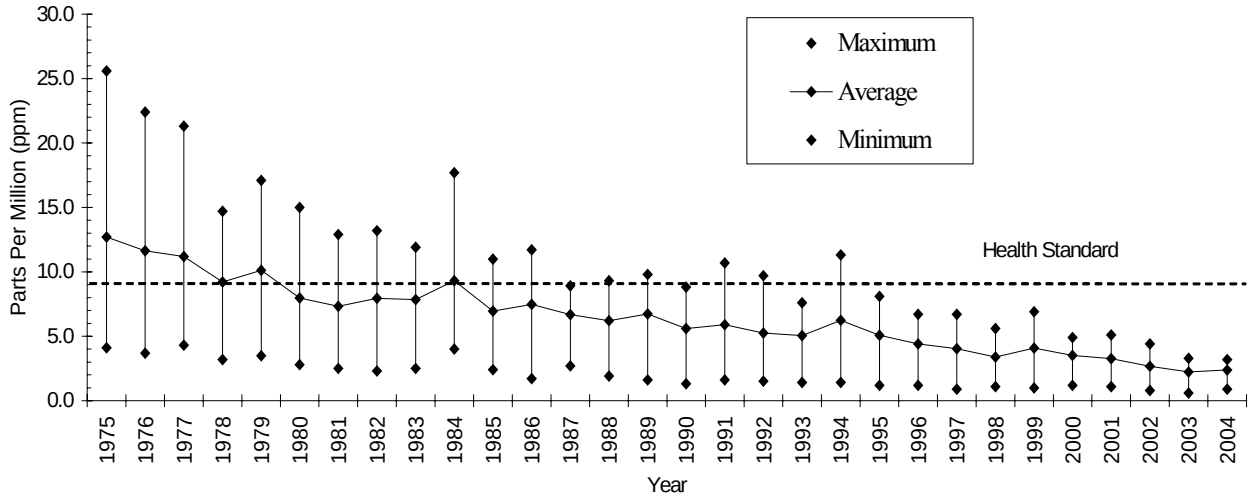
Table IV and Table V show the calculation of the updated 2007 and 2014 budgets, respectively. It should be noted that 1996 statewide levels of carbon monoxide were measured to be only about 75 percent (maximum second highest 8-hour average) of the carbon monoxide 8-hour NAAQS monitored in the area as shown in Figure II. Also, for monitors within the New Jersey portion of the New York/New Jersey/Long Island carbon monoxide maintenance area, the maximum second highest 8-hour average carbon monoxide levels were all below 7.0 parts per million (NAAQS is 9.0 parts per million). Therefore, the 1996 inventory represents carbon monoxide emission levels that are likely significantly lower than the minimum levels required to achieve attainment of the NAAQS resulting in conservatively lower carbon monoxide budgets. Additional information concerning historical measurements of carbon monoxide levels in New Jersey are provided in the carbon monoxide Limited Maintenance Plan section of this SIP revision, Section III.

Table III
Maintenance Plan Inventories for the New Jersey Portion of the New York City/Northern New Jersey/Long Island Carbon Monoxide Nonattainment Area

County	New Jersey Portion of the New York City/Northern New Jersey/Long Island Carbon Monoxide Area - Carbon Monoxide Emissions in Tons Per Winter Season Day		
	1996 (Attainment Year)	2007	2014
Bergen	455.29	350.56	381.01
Essex	287.10	209.08	222.18
Hudson	183.64	118.20	130.76
Passaic	220.17	163.46	171.53
Union	219.11	156.41	166.45
Totals	1,365.31	997.71	1,071.93

[12] 40 CFR 93.124
[13] Op cit, note 12.
[14] 67 Fed. Reg., 54577 (August 23, 2002).

Figure II
Carbon Monoxide Statewide Air Quality, 1975-2004
2nd Highest 8-Hour Average



2007 Safety Margin Calculation

1365.31 tons per day (1996 total emissions) – 997.71 tons per day (2007 total emissions) = 367.60 tons per day (2007 margin of safety)

367.60 tons per day + 783.39 tons per day (existing 2007 carbon monoxide budget) = 1150.99 tons per day (onroad emission budget for 2007 including the margin of safety)

Table IV
2007 Margin of Safety Calculation

Year	Total Emissions 1996	Total Emissions 2007	2007 Margin of Safety	Prior 2007 budget	Updated 2007 budget
Budget (tons/day)	1365.31	997.71	367.60	783.39	1150.99

2014 Safety Margin Calculation

1365.31 tons per day (1996 total emissions) – 1071.93 tons per day (2014 total emissions) = 293.38 tons per day (2014 margin of safety)
293.38 tons per day + 605.63 tons per day (existing 2014 carbon monoxide budget) = 899.01 tons per day (onroad emission budget for 2014 including the margin of safety)

Table V
2014 Margin of Safety Calculation

Year	Total Emissions 1996	Total Emissions 2014	2014 Margin of Safety	Prior 2014 budget	Updated 2014 budget
Budget (tons/day)	1365.31	1071.93	293.38	605.63	899.01

Ozone Budgets – VOC/NO_x

The United States Department of Transportation (USDOT) and the USEPA guidance strongly recommend five year updates to planning assumptions.[15] The new planning assumptions involve updates to the vehicle miles traveled adjustment files and the vehicle miles traveled fractions assigned to the various vehicle types planning assumptions. These vehicle miles traveled adjustment files are used to modify travel demand model predicted vehicle miles traveled to match the vehicle miles traveled reported in the Highway Performance Monitoring System. The use of updated predicted levels of vehicle miles traveled and an updated allocation of vehicle miles traveled between the various vehicle types for the North Jersey Transportation Planning Authority region caused VOC and NO_x emission predictions to increase by amounts greater than can be reduced by the Metropolitan Planning Organization changing transportation projects. An additional change in planning assumptions was an update of the vehicle age distribution for light duty gasoline cars and trucks that had a net effect of generally reducing the age of these vehicle classes. This caused significant reductions in the forecasting of both VOC and NO_x emissions because vehicle emission standards become more stringent over time.

The overall result of all planning assumption changes was a reduction in the VOC budgets but an increase in the NO_x budgets. The changes in the budgets are less than the amounts that would cause New Jersey emissions to no longer support predicted achievement of projected attainment of the 1-hour ozone NAAQS by the attainment date as shown in Section II.B.1.i.b. Even though the 1-hour ozone standard is revoked, the USEPA requires the 1-hour ozone budgets to be used until the 8-hour ozone standard budgets are established as part of the attainment demonstration due in 2007. The computer files used to generate the updated VOC and NO_x budgets are contained in Appendix C.

The budgets for Ocean County are provided in Appendix C where breakouts by county are reported. The North Jersey Transportation Planning Authority needs to breakout Ocean County in its conformity determinations because it is part of the Philadelphia/Wilmington/Atlantic City 8-hour ozone nonattainment area while the other North Jersey Transportation Planning Authority counties are part of the New York City/Northern New Jersey/Long Island 8-hour ozone nonattainment area.

[15] USEPA and U.S. Department of Transportation, Memorandum on "Use of Latest Planning Assumptions in Conformity Determinations," January 18, 2001.

i. Effect of Updated Transportation Conformity Emission Budgets on the Carbon Monoxide Maintenance Plans

Actual measured carbon monoxide concentrations have been steadily decreasing over the last thirty years as a likely consequence of improvements in motor vehicle emission technology. Onroad mobile sources have historically contributed the largest portion of the carbon monoxide inventory in New Jersey relative to the other source sectors. The last time the carbon monoxide NAAQS was exceeded in New Jersey was in January of 1995. The monitored carbon monoxide levels have trended downward so that the maximum measured values are currently about one-half of the NAAQS level as shown in Figure II.

Prior and updated carbon monoxide budgets for the New Jersey portion of the New York City/Northern New Jersey/Long Island carbon monoxide maintenance area were provided in Table II. The only revision performed to the prior carbon monoxide budgets was the inclusion of safety margins calculated from the USEPA approved maintenance plan. Safety margins were incorporated so that the updated carbon monoxide transportation conformity emission budgets represent constraints on emissions from onroad sources that will maintain attainment of the carbon monoxide NAAQS without being overly restrictive of the transportation project planning process. The updates to the carbon monoxide budgets do not affect the conclusions of the carbon monoxide maintenance plan for the New York City/Northern New Jersey/Long Island area because they were performed using the inventory estimates from that plan.

ii. Effect of Updated Transportation Conformity Emission Budgets on the Ozone Attainment Demonstration

It is necessary to assess the impacts on the 1-hour ozone SIP when the 1-hour budgets are updated to ensure that air quality progress is maintained. In order to perform this comparison, the State's attainment demonstration and the USEPA's subsequent re-analyses of the attainment demonstration were examined in order to extract mobile onroad inventories which best represent conditions in both the base year and the attainment year. Inventories for both of these years are needed because the weight of evidence method was used to demonstrate attainment. A detailed description of the weight of evidence method is available in the 2003 MOBILE6 SIP revision.[16] The determination of whether or not attainment is still demonstrated depends on the relative reduction of the ozone precursors between the base year and the attainment year. If these relative reductions with the updated inventories (consistent with the updated budgets) are equal to or greater than the relative reductions with the previous inventories (representative of the attainment demonstrations), then attainment continues to be demonstrated.

Inventories from the recent Rate of Progress SIP[17] were used to determine the required percent reduction in ozone precursors in order to achieve attainment by the attainment date of 2007. The onroad mobile source inventories from the Rate of Progress SIP are used for this attainment

[16] NJDEP, SIP Revision for the Attainment and Maintenance of the Ozone NAAQS, New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using the MOBILE6 Model, April 4, 2003.
[17] NJDEP, State Implementation Plan revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard, New Jersey 1996 Actual Emission Inventory and Rate of Progress (ROP) Plans for 2002, 2005 and 2007, March 31, 2001.

analysis because they are the most recent SIP-quality inventories prepared that include essentially all of the control measures anticipated for the areas to achieve attainment. In addition, the Rate of Progress SIP inventories were prepared for the 1996 base year as well as the attainment year for the nonattainment area. These inventories are the best available representations of the base year and attainment year inventories that formed the basis for the 1-hour ozone attainment demonstration so they are the appropriate inventories to use for this attainment analysis.

The results of the comparisons between the previous inventories (from the Rate of Progress SIP) and the updated inventories are summarized in Table VI, which presents the relative reductions (expressed as percent reductions) in onroad mobile source ozone precursor inventories between the base year and the attainment year. The differences in percent reductions are shown between the previous inventories and the updated inventories. The updated inventories for 1996 were the same as those established in the 2003 MOBILE6 SIP except that the updated vehicle miles traveled-by-vehicle-type file was used.[18] The updated vehicle miles traveled-by–vehicle-type data was used for both the base year and projection year runs because this change in planning assumptions represents an improvement in the methodology of estimating local conditions as opposed to a change in the actual conditions. This contrasts with the update to the vehicle miles traveled adjustment and vehicle age distribution data that only applies to projection year runs and is not used for the 1996 run.

As a result of the use of the weight of evidence method for demonstration of attainment, increases in percent reductions mean that the updated inventories predict lower ozone precursor emissions in the attainment year relative to the base year. Similarly, decreases in percent reductions mean that the updated inventories predict higher ozone precursor emissions in the attainment year relative to the base year. In Table VI, the magnitude that the ozone precursor emissions are lower or higher are represented by the calculated "increase" or "decrease", respectively.

[18] NJDEP. Final State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard (NAAQS), New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using MOBILE6 Model, 2003.

Table VI
Comparison of the Onroad Previous Inventories to the Updated Onroad Inventories
(Tons Per Ozone Day Unless Designated Otherwise)

	New Jersey Portion of the New York City/Northern New Jersey/Long Island Area[(1)] - 2007 Attainment Year -	
	VOC	**NO_x**
(1) Previous Inventory - 1996	206.52	302.92
(2) Previous Inventory - Attainment Year	89.82	165.11
(3) Previous Reductions [(1) – (2)]	116.70	137.81
(4) Previous % Reductions [(3) / (1) x 100%]	56.51%	45.49%
(5) Updated - 1996	306.50	439.88
(6) Updated - Attainment Year	119.29	245.87
(7) Updated - Reductions [(5) – (6)]	187.21	194.01
(8) Updated - % Reductions [(7) / (5) x 100%]	61.08%	44.11%
(9) Difference in % Reductions [(8) – (4)] Note that positive values represent increases in percent reductions.	+4.57%	-138%
(10) Emission reduction increase (+) or decrease (-) in tons per day[(2)] [((9) / 100%) x (5)]	+14.01	-6.09

NOTES:

(1) This area includes all of the North Jersey Transportation Planning Authority counties except for Warren County. These emissions differ from the transportation conformity budgets because the budgets include all of the North Jersey Transportation Planning Authority counties including Warren County.

(2) The "increase" or "decrease" was calculated by multiplying the differences in percent reductions by the 1996 updated inventories. These "increases" and "decreases" are calculated only for the purpose of demonstrating if the updated inventories continue to meet the objectives of the attainment demonstration.

The results summarized in Table VI indicate that the updated inventories predict that VOC emissions in the attainment year relative to the base year are lower, i.e., an "increase" of 14.01 tons per day. However, the updated inventories predict that NO_x emissions in the attainment year relative to the base year are higher, i.e., a "decrease" of 6.09 tons per day. In order to evaluate the net effect of these changes, a means of substitution of VOC reductions with NO_x reductions is needed. The following substitution methodology was developed based on the methodology developed in a prior SIP revision by New Jersey that was approved by the USEPA.[19]

[19] NJDEP. Final State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard (NAAQS), New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using MOBILE6 Model, 2003.
USEPA approval: 68 Fed. Reg. 43462.

42 U.S.C. §7511a. allows for the substitution of VOC emission reductions with NO_x emission reductions. Consistent with the USEPA guidance on NO_x substitution,[20] for substitution to be acceptable it must be demonstrated that such substitution yields equivalent ozone results. The air quality modeling in New Jersey's Phase I Ozone SIP[21] provided such an equivalency demonstration for the nonattainment area. In order to make the substitution in this case, a VOC to NO_x emissions ratio for the entire Northern New Jersey/New York City/Long Island Nonattainment Area was calculated. This calculation is presented in Appendix C. First, the VOC and NO_x emission inventories for the counties from the various states in the nonattainment area were totaled. A VOC to NO_x ratio of 1.29 was derived from these data, i.e., 1 ton of NO_x emission reduction is equivalent to 1.29 tons of VOC in terms of ozone reduction.

Since 1 ton of NO_x emission reduction is equivalent to 1.29 tons of VOC in terms of ozone reduction, the 6.09 tons per day of NO_x can be offset by 7.86 tons per day of the VOC ((6.09 tons per day NO_x) X (1.29) = 7.86 tons per day VOC). This leaves a net VOC reduction increase of 6.15 tons per day (14.01 tons per day – 7.86 tons per day = 6.15 tons per day). The remaining VOC emissions indicate that New Jersey's attainment demonstration for the nonattainment area remains valid when the current updates to the on-road modeled emission projections are completed.

The Rate of Progress demonstrations for the New Jersey portion of the New York City/Northern New Jersey/Long Island nonattainment area also remain valid because the projected increases in the onroad inventories due to the change in planning assumptions are orders of magnitude below the amounts that would result in failure to meet the Rate of Progress targets. According to the Rate of Progress SIP, VOC emissions would have to be higher by 354.06 tons per day in 2005 or 314.05 tons per day in 2007 before Rate of Progress targets are missed.[22]

Based on New Jersey's update of its transportation conformity emission budgets, the New Jersey portion of the New York City/Northern New Jersey/Long Island nonattainment area is still predicted to achieve Rate of Progress targets and attainment of the 1-hour ozone standard by the attainment date of 2007. It should be noted that these increases in percent emission reductions could not be reallocated to cover potential emission shortfalls in other areas without a more rigorous reassessments.

2. Amendment to the McGuire Air Force Base Conformity Budget

An emission budget was established for McGuire Air Force Base under the General Conformity Rule in order to ensure that any increases in activity at McGuire Air Force Base conform to the 1-hour ozone SIP. Emission budgets for VOC and NO_x were established for 1990, 1996 and

[20] USEPA, Office of Air Quality Planning and Standards, NO_x Substitution Guidance, December 1993.
[21] NJDEP, "State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy, Phase I Ozone SIP Submittal", December 31, 1996.
[22] NJDEP, State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, New Jersey 1996 Actual Emission Inventory and Rate of Progress Plans for 2002, 2005 and 2007, 2001, Table 29 on page 65.

1999 in cooperation with the United States Air Force.[23,24] In 2001, the general conformity emission budgets for McGuire Air Force Base were extended to 2002 and 2005.[25] In 2003, the general conformity emission budgets for McGuire Air Force Base were updated to accommodate additional aircraft activity.[26]

McGuire Air Force Base has had success over the years in reducing emissions through the implementation of pollution prevention measures. Their efforts have been more successful in reducing VOC emissions than in reducing NO_x emissions. McGuire Air Force Base has utilized aircraft retirement, mission changes, fuel replacement and maintenance measures to reduce VOCs. McGuire Air Force Base continues to enhance its pollution prevention measures. McGuire Air Force Base uses the Hazardous Material Pharmacy, which enhances the management of VOC containing materials used on base. McGuire Air Force Base provides education and training on the proper use of materials, conducts audits, and utilizes product substitution and consolidation to reduce VOCs. In addition, the anticipated retirement of additional aircraft will further reduce VOC emissions.

McGuire Air Force Base is anticipating expansion of their overall mission, including anticipated base realignment and closure actions and other mission changes. In addition, it is critical for McGuire Air Force Base to have operational flexibility in order to meet its mission as well as the future missions of the Department of Defense. Since McGuire Air Force Base has calculated that they will need an increased NO_x budget to be in such a position, McGuire Air Force Base has requested a change in their general conformity budgets.[27] The current and projected VOC emissions at McGuire Air Force Base are well below budget levels. Therefore, this request for an increase in the NO_x budget will be offset by a decrease in their VOC budget.

Such a change in McGuire Air Force Base's general conformity budgets is an acceptable air quality solution, as this change is consistent with the USEPA policy of substitution of ozone precursor emission reductions.[28] In a previous budget revision for McGuire Air Force Base,[29] a substitution ratio of 1.04 tons of VOC for every ton of NO_x was established. Air quality modeling conducted for the Philadelphia airshed was used to develop the substitution ratio for the McGuire area. This approach was approved by the USEPA.[30]

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[23] McGuire Air Force Base Conformity Determination. July, 1995.
[24] NJDEP, State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Phase I Ozone SIP Submittal, 1996, p. 123.
[25] NJDEP, State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, New Jersey 1996 Actual Emission Inventory and Rate of Progress Plans for 2002, 2005 and 2007, 2001, p. 71.
[26] Approval and Promulgation of Implementation Plans; New Jersey; Revised Motor Vehicle Emissions Inventories for 1996, 2005, and 2007 and Motor Vehicle Emissions Budgets for 2005 and 2007 Using MOBILE6, Final Rule, 68 Fed. Reg., 43463 (July 23, 2003).
[27] U.S. Dept. of the Air Force, Letter from John Hoertz, Program Manager, Air Force Center for Environmental Excellence, Atlanta, Georgia to Sandra Krietzman, Chief, NJDEP, Bureau of Air Quality Planning, Requesting Conformity Budget Change, October 11, 2005.
[28] USEPA, "NO_x Substitution Guidance," 1993.
[29] NJDEP. Final State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard (NAAQS), New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using MOBILE6 Model, 2003.
[30] 68 Fed. Reg., 43462-43465 (July 23, 2003).

McGuire Air Force Base holds a vital status in the national defense. Mission responsibilities include the movement of troops, passengers, military equipment, cargo and mail, and aerial refueling. The mission of McGuire Air Force Base carries its aircrews and aircraft throughout more than fifty countries around the globe on an around-the-clock basis. With peacetime taskings serving as training for wartime requirements, the base is continually postured in a state of preparedness. Approval of the SIP emission budgets change would enhance the base's ability to meets its overall mission.

The State has agreed to comply with McGuire Air Force Base's request for a general conformity budget change. The NO_x budgets are being increased by 450 tons per year and the VOC budgets are being decreased by 468 tons per year (Table VII).

Table VII
Emission Budgets for McGuire Air Force Base

	Prior Budget		Updated Budget	
	VOC (Tons/Year)	**NO_x (Tons/Year)**	**VOC (Tons/Year)**	**NO_x (Tons/Year)**
1990 Baseline	1,112	1,038	1,112	1,038
1996	1,186	1,107	1,186	1,107
1999	1,223	1,142	1,223	1,142
2002	1,405	875	1,405	875
2005(1)	1,198	1,084	730	1,534

NOTES:
(1) Budgets updated such that the increase in NO_x is offset by a decrease in VOC such that there is no expected net increase in ozone formation. Updated 2005 budgets apply to 2005 and all future years until new budgets are established for the 8- hour ozone attainment demonstration.

C. New Budget – Particulate Matter Budget for Northern New Jersey

The establishment of early $PM_{2.5}$ budgets is to require their use by the Metropolitan Planning Organizations in their transportation conformity determinations during the interim period prior to the $PM_{2.5}$ attainment demonstration SIP budgets.[31] Establishment of these early transportation conformity emission budgets will enable the affected Metropolitan Planning Organizations to demonstrate transportation conformity by the preferred method of remaining below area specific budgets instead of using one of the interim emissions tests. The early budgets are based on direct $PM_{2.5}$ and annual NO_x inventories that demonstrate at least a five to ten percent reduction between 2002 and 2009 for sources in the New Jersey portion of the New York /New Jersey/Long Island/Connecticut nonattainment area.[32]

The early budgets must be used for future transportation conformity determinations by the North Jersey Transportation Planning Authority and the Delaware Valley Regional Planning Commission once approved by the USEPA. The North Jersey Transportation Planning Authority and the Delaware Valley Regional Planning Commission are two of the three Metropolitan Planning Organizations that cover the State of New Jersey (see Figure I).

[31] The attainment demonstration SIP for the $PM_{2.5}$ NAAQS is not due until April 2008.
[32] Personal communication with USEPA II, October 2005.

1. $PM_{2.5}$ General Background[33]

Particulate matter is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Many manmade and natural sources emit particulate matter directly or emit other pollutants that react in the atmosphere to form particulate matter. Sources of fine particles include all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. Other particles may be indirectly formed when gases from burning fuels react with sunlight and water vapor.

Particles less than 10 micrometers in diameter (PM_{10}) pose a health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter, $PM_{2.5}$, are referred to as "fine" particles and are believed to pose the greatest health risks. Because of their small size (approximately 1/30th the average width of a human hair), fine particles can lodge deeply into the lungs. Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse."

Health studies have shown a significant association between exposure to fine particles and premature death. Other important effects include aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days), lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heart beat. Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children. Roughly one out of every three people in the United States is at a higher risk of experiencing $PM_{2.5}$ related health effects: active children because they often spend a lot of time playing outdoors and their bodies are still developing and oftentimes the elderly population is at risk.

2. Establishment of the $PM_{2.5}$ Standard

42 U.S.C §7409 requires the USEPA to set national ambient air quality standards (NAAQS) for widespread pollutants from numerous and diverse sources that are considered harmful to public health and the environment. These standards are established to protect the most sensitive individuals. The Clean Air Act[34]established two types of NAAQS. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment and damage to animals, crops, vegetation, and buildings. The Clean Air Act[35] requires periodic review of the science upon which the standards are based and the standards themselves. The USEPA has set NAAQS for six criteria pollutant. These criteria pollutants are carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides.

[33] Additional background information can be found at the USEPA website (http://www.epa.gov/pmdesignations/faq.htm%230).
[34] 42 U.S.C. §7409(a).
[35] 42 U.S.C §7409(d).

In July of 1997, the USEPA revised the primary (health-based) particulate matter standards by promulgating two $PM_{2.5}$ NAAQS: a 24-hour $PM_{2.5}$ standard set at 65 micrograms per cubic meter ($\mu g/m^3$) (24-hour average) and an annual $PM_{2.5}$ standard set at 15 $\mu g/m^3$ (annual arithmetic mean). The USEPA added these new $PM_{2.5}$ standards while retaining the existing annual PM_{10} standard of 50 $\mu g/m^3$ and adjusting the PM_{10} 24-hour standard of 150 $\mu g/m^3$ by changing the form of the standard. The ambient air quality in New Jersey continues to meet the PM_{10} NAAQS and is designated as attainment.

After the USEPA promulgated the $PM_{2.5}$ and 8-hour ozone standards in July 1997, several industry organizations and state governments challenged USEPA's action in the U.S. Court of Appeals for the District of Columbia Circuit (the D.C. Circuit). After several years of legal challenges, some of which were heard by the United States Supreme Court, the D.C. Circuit issued its decision on March 26, 2002 rejecting the claim that the USEPA had acted arbitrarily and capriciously in setting the levels of the standards. This last decision by the D.C. Circuit gave the USEPA a clear path to move forward with implementation of the $PM_{2.5}$ standards.

The Clean Air Act (42 U.S.C. §7409(d)) requires the USEPA to periodically review air quality standards to ensure they provide adequate health and environmental protection and to update those standards if necessary. The USEPA has proposed revisions to strengthen the current $PM_{2.5}$ standards as well as proposed a standard for reducing inhalable coarse particles (particles between 2.5 and 10 micrometers). The USEPA has established a tentative timeline for this process that includes November of 2006 as the effective date of the revised/new standards, July of 2013 as the effective date of designations, and July of 2018 as the prospective attainment date.

3. Designation of $PM_{2.5}$ Nonattainment Areas in New Jersey

The USEPA promulgated the NAAQS for $PM_{2.5}$ in July of 1997. According to the Clean Air Act, states and tribes are required to submit recommendations for designations no later than one year after a NAAQS has been revised or newly promulgated. The USEPA is then required to designate areas across the country within two years following the promulgation of the NAAQS. USEPA may extend the time period for making designations by up to one additional year if the USEPA lacks sufficient information to make the designations.

The USEPA issued final area designations for $PM_{2.5}$ on December 17, 2004. The affected New Jersey counties are shown in Figure III. Designations became effective on April 5, 2005. Transportation conformity for $PM_{2.5}$ becomes effective on April 5, 2006. This is because there is a one-year grace period from the effective date of designations before transportation conformity applies for that standard.

States with designated $PM_{2.5}$ nonattainment areas are required to develop a SIP and submit it to the USEPA within three years of designation or April of 2008[36]. This plan must include enforceable measures for reducing air pollutant emissions leading to the formation of fine particles in the atmosphere. The plan must also provide steps for the area to attain the $PM_{2.5}$ standard as quickly as possible. The USEPA has recently issued a proposed $PM_{2.5}$

[36] http://www.epa.gov/pmdesignations

implementation rule to provide further guidance on what should be included in $PM_{2.5}$ plans. State plans need to demonstrate that the nonattainment area will attain the standards "as expeditiously as practicable."

4. Transportation Conformity for $PM_{2.5}$

The Transportation Conformity Rules that established the criteria and procedures relating to transportation conformity for $PM_{2.5}$ were promulgated by the USEPA on July 1, 2004.[37] Before a SIP budget is available, either through an adequacy finding or approval by the USEPA, conformity of the transportation plan, transportation improvement program, or project not from a conforming plan is demonstrated with the interim emissions tests.[38] The interim emissions tests for $PM_{2.5}$ are either the baseline year test or the build/no-greater-than-no-build test.

The baseline year test is passed when the emissions from the proposed transportation system are either less than or no greater than 2002 motor vehicle emissions in a given nonattainment area. Conformity is demonstrated with the build/no-greater-than-no-build test if emissions from the proposed transportation system ("build" or "action" scenario) are less than or equal to the emissions in the same future analysis year from the existing transportation system ("no-build" or "baseline" scenario). The Metropolitan Planning Organizations in $PM_{2.5}$ nonattainment areas must utilize either the baseline year test or the build/no-greater-than-no-build test until the budgets are found adequate by the USEPA. Regardless of the test performed, conformity analyses are subject to final approval by the United States Department of Transportation.

Four transportation related $PM_{2.5}$ precursors – NO_x, VOCs, SO_x, and NH_3 – must be considered in the conformity process in $PM_{2.5}$ nonattainment areas. The USEPA requirements[39] for the consideration of $PM_{2.5}$ precursors are:

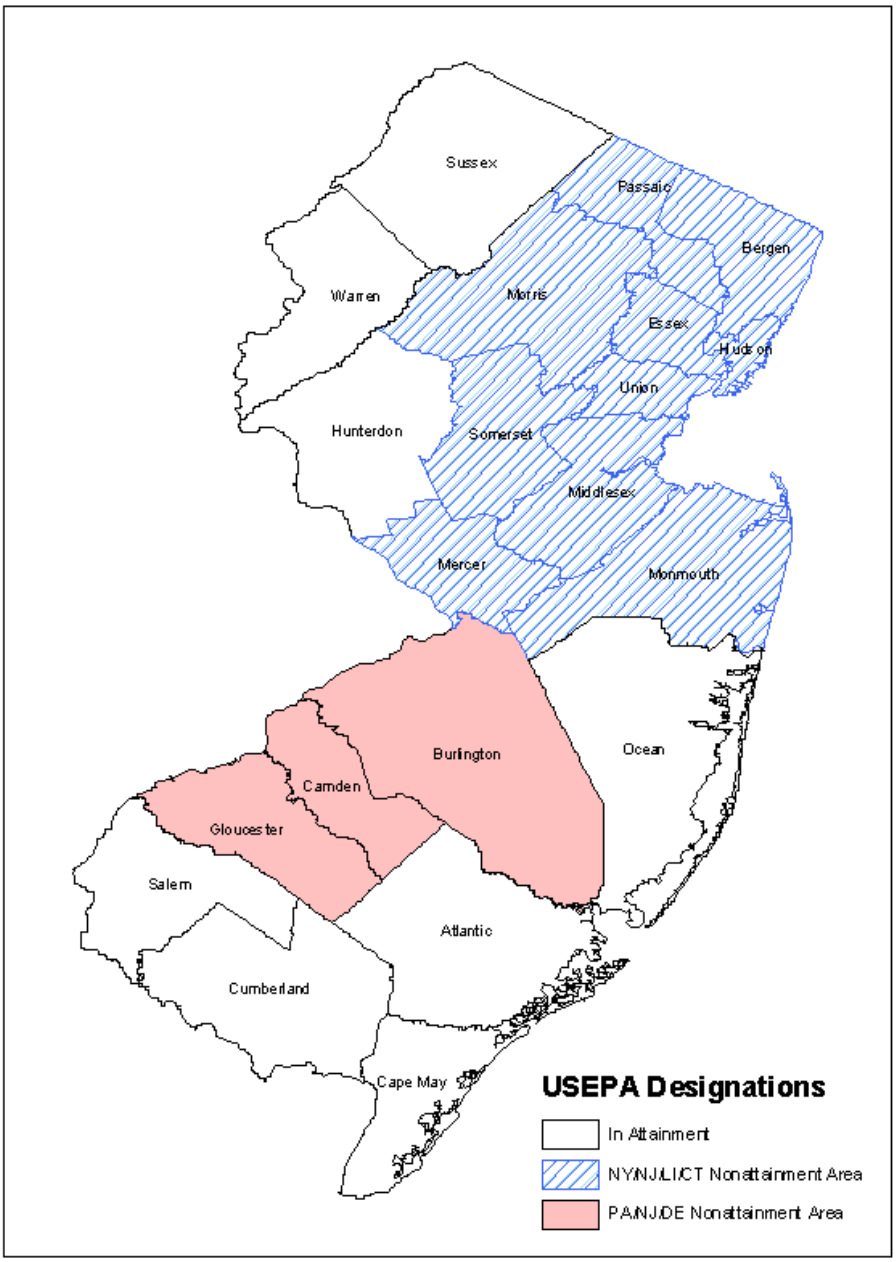
- Regional emissions analysis must include NO_x as a $PM_{2.5}$ precursor in all $PM_{2.5}$ nonattainment areas, unless the head of the state air agency and the USEPA Regional Administrator make a finding that NO_x is not a significant contributor to the $PM_{2.5}$ air quality problem in a given area.

- Regional emissions analyses are not required for VOC, SO_x or NH_3 before an approved SIP budget for such precursors is established, unless the head of the state air agency or the USEPA Regional Administrator makes a finding that onroad emissions of any of these precursors is a significant contributor.

[37] Transportation Conformity Rule Amendments for the New 8-hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes; Final Rule, 69 Fed. Reg., 40004-40081 (July 1, 2004).
[38] 40 CFR 93.119.
[39] Transportation Conformity Rule Amendments for the New $PM_{2.5}$ National Ambient Air Quality Standard: $PM_{2.5}$ Precursors, Final Rule, 70 Fed. Reg., 24280 (May 6, 2005).

Figure III

USEPA Designations of Nonattainment Areas for PM 2.5 in New Jersey



Date: December 21, 2004
Source: http://www.epa.gov/pmdesignations/finaltable.htm
Map: epa_nj

The following criteria are considered in making significance or insignificance findings for $PM_{2.5}$ precursors:

- The contribution of onroad emissions of the precursor to the total 2002 baseline SIP inventory;
- The current state of air quality for the area;
- The results of speciation monitoring for the area;
- The likelihood that future motor vehicle control measures will be implemented for a given precursor; and,
- Projections of future onroad emissions of the precursor.

The early budgets for $PM_{2.5}$ precursors include the establishment of an annual NOx budget. The State will study the significance of the other $PM_{2.5}$ precursors in the attainment demonstration SIP, due to be submitted in April 2008. Studying the significance of these precursors with the attainment demonstration will enable the State to utilize the best available information, monitoring data, inventory data and modeling data in its determinations.

5. Early $PM_{2.5}$ Transportation Conformity Emission Budgets

i. $PM_{2.5}$ and Annual NO_x Inventories for 2002 and 2009

To establish an early $PM_{2.5}$ budget, the USEPA requires[40] that:

In reference to the voluntary SIP that includes early budgets, the preamble states:

> "To be approvable, such a SIP would have to include inventories for all source sectors and meet other SIP requirements. While these early SIPs would have to show some progress toward attainment, it is not a requirement that all of the reductions would come from onroad mobile vehicles."

The term "some progress toward attainment" has been interpreted by the USEPA to mean that the total 2009 inventories for direct $PM_{2.5}$ and annual NO_x to be less than the 2002 values by at least five to ten percent.[41] Annual NO_x is the only $PM_{2.5}$ precursor for which a budget is being established at this time. The additional information and data on $PM_{2.5}$ precursors that will be available during the preparation of the $PM_{2.5}$ attainment demonstration may result in the establishment of budgets for additional or different specific precursors. The five percent to ten percent criteria is met for the New Jersey portion of the New York/New Jersey/Long Island /Connecticut $PM_{2.5}$ nonattainment area but is not met for the New Jersey portion of the Philadelphia/Wilmington $PM_{2.5}$ nonattainment area. Preliminary results show a small increase in overall direct $PM_{2.5}$ emissions between 2002 and 2009 for the New Jersey portion of the Philadelphia/Wilmington $PM_{2.5}$ nonattainment area. Therefore, early $PM_{2.5}$ budgets are being established for the New Jersey portion of the New York/New Jersey/Long Island /Connecticut $PM_{2.5}$ nonattainment area only.

[40] 69 Fed. Reg., 40030.
[41] USEPA Region 2 and NJDEP, conference call, October 4, 2005.

Table VIII shows the results of the 2002 and 2009 direct $PM_{2.5}$ inventory (with anticipated controls in place) by source type for the New Jersey counties in the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area. Emissions from controlled stationary and area sources are projected to increase by nine and three percent respectively, for a total increase of 438 tons per year. The increase is projected to be more than offset by projected decreases in $PM_{2.5}$ emissions from onroad and nonroad mobile sources, by a total of 1,343 tons per year, for an overall decrease of 905 tons per year by 2009; this represent an overall 6.5% reduction in direct $PM_{2.5}$ emissions, see Table IX. Thus the area meets the USEPA's criteria for "progress toward attainment" for direct $PM_{2.5}$ emissions.

Table VIII
Direct $PM_{2.5}$ Emission Inventories for 2002 and 2009 for the New Jersey Portion of the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ Nonattainment Area

	DIRECT ANNUAL $PM_{2.5}$ CONTROLLED EMISSIONS (TONS PER YEAR) [1]											
	AREA			NONROAD			STATIONARY			ONROAD		
COUNTY	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**
BERGEN	537	569	+32	478	419	-59	149	183	+34	376	214	-162
ESSEX	411	436	+25	393	341	-51	185	222	+37	291	163	-128
HUDSON	269	286	+16	345	299	-45	1,077	1,085	+7	134	76	-58
MERCER	530	548	+18	203	177	-26	188	212	+24	141	89	-52
MIDDLESEX	467	497	+30	346	299	-47	483	553	+70	347	207	-140
MONMOUTH	981	1,002	+21	501	426	-75	55	66	+10	244	145	-100
MORRIS	1,284	1,297	+13	280	251	-29	39	45	+6	209	126	-83
PASSAIC	543	554	+11	178	151	-27	19	22	+3	141	81	-60
SOMERSET	441	452	+11	149	131	-19	55	60	+4	152	88	-64
UNION	272	289	+17	333	291	-42	540	589	+49	185	108	-78
TOTAL for New Jersey portion of the NY/NJ/ LI/CT Area	**5,736**	**5,930**	**+193 (+3%)**	**3,206**	**2,788**	**-419 (-13%)**	**2,790**	**3,035**	**+245 (+9%)**	**2,220**	**1,296**	**-924 (-42%)**

NOTES:

(1) In order for the calculated inventory values to more closely match the actual measured levels in New Jersey air quality monitors, the fugitive dust emissions were multiplied by a dust adjustment factor of 20%. Fugitive dusts are directly released air contaminants that do not pass through an exhaust pipe, stack, flue, vent or chimney. The main sources of fugitive dusts are dust from paved and unpaved roadways, stock/storage piles, landfill activity, quarry/mining activity, raw material handling, construction and agricultural tilling.

Table IX
Direct $PM_{2.5}$: Calculation of the Percent Reduction in Projected 2009 Emissions from the 2002 Emissions by County

	% EMISSION REDUCTION	CONTROLLED EMISSIONS ANNUAL (TONS PER YEAR)[(1)]		
		TOTAL OF ALL SECTORS		
COUNTY	**(2009-2002)/2002**	**2002**	**2009**	**2009-2002**
BERGEN	-10.0%	1,540	1,385	-155
ESSEX	-9.2%	1,280	1,162	-117
HUDSON	-4.4%	1,825	1,746	-80
MERCER	-3.4%	1,062	1,026	-36
MIDDLESEX	-5.3%	1,643	1,556	-87
MONMOUTH	-8.1%	1,781	1,639	-144
MORRIS	-5.1%	1,812	1,719	-93
PASSAIC	-8.3%	881	808	-73
SOMERSET	-8.6%	797	731	-68
UNION	-4.0%	1,330	1,277	-54
TOTAL for New Jersey portion of the NY/NJ/ LI/CT Area	**-6.5%**	**13,952**	**13,049**	**-905**

NOTES:

(1) In order for the calculated inventory values to more closely match the actual measured levels in New Jersey air quality monitors, the fugitive dust emissions were multiplied by a dust adjustment factor of 20%. Fugitive dusts are directly released air contaminants that do not pass through an exhaust pipe, stack, flue, vent or chimney. The main sources of fugitive dusts are dust from paved and unpaved roadways, stock/storage piles, landfill activity, quarry/mining activity, raw material handling, construction and agricultural tilling.

Table X shows the results of the 2002 and projected 2009 NO_x inventories by source type for the New Jersey counties in the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area. Emissions from stationary and area sources are projected to increase by seven percent in both categories, for a total increase of 3,698 tons per year. The increase is projected to be more than offset by projected decreases in NO_x emissions from onroad and nonroad mobile sources, by a total of 79,959 tons per year, for an overall decrease of 76,261 tons per year, or about thirty-two percent (32%), by 2009. Thus the area meets the USEPA's criteria for "progress toward attainment" for direct NOx emissions**.**

Table X
Annual NO_x Emission Inventories for 2002 and 2009 for the New Jersey Portion of the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ Nonattainment Area

	CONTROLLED EMISSIONS ANNUAL (TONS PER YEAR)											
SOURCE CATEGORY	**AREA**			**NONROAD**			**STATIONARY**			**ONROAD**		
COUNTY	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**	**2002**	**2009**	**(2009-2002)**
BERGEN	2,815	3,019	+204	6,707	5,178	-1,530	988	1,189	+201	23,917	11,198	-12,719
ESSEX	2,436	2,621	+185	8,137	7,048	-1,090	2,441	3,081	+640	16,537	7,979	-8,558
HUDSON	1,735	1,864	+129	5,976	5,291	-685	9,674	9,970	+296	7,853	3,873	-3,980
MERCER	1,257	1,354	+97	2,427	1,898	-529	13,034	13,201	+167	8,505	4,328	-4,177
MIDDLESEX	2,343	2,512	+169	4,849	3,745	-1,104	3,567	4,164	+597	22,147	10,871	-11,276
MONMOUTH	1,806	1,934	+128	4,316	3,846	-470	240	272	+31	14,860	6,973	-7,887
MORRIS	1,752	1,879	+127	3,151	2,417	-735	284	337	+53	13,748	6,398	-7,350
PASSAIC	1,361	1,452	+91	2,413	1,800	-613	122	144	+22	8,748	4,164	-4,584
SOMERSET	1,048	1,121	+74	2,097	1,570	-527	313	370	+57	9,090	4,376	-4,715
UNION	1,621	1,732	+111	5,883	4,903	-980	3,757	4,077	+320	12,294	5,844	-6,451
TOTAL for New Jersey portion of the NY/NJ/ LI/CT Area	**18,173**	**19,488**	**+1,314 (+7%)**	**45,957**	**37,694**	**-8,262 (-18%)**	**34,420**	**36,804**	**+2,384 (+7%)**	**137,701**	**66,004**	**-71,697 (-52%)**

Table XI is a comparison of total NO_x emissions for 2002 and 2009 by source sector for the New Jersey counties in the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area. Annual NO_x emissions are projected to be lower in each county and across the entire New Jersey portion of the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area by 17.6 percent to 41.7 percent with an average of over 30 percent. Based on these annual NO_x inventories, the New Jersey portion of the New York /New Jersey/Long Island/Connecticut area meets the USEPA criteria of a reduction of at least five to ten percent to allow the area to be considered for the establishment of early $PM_{2.5}$ budgets in a voluntary SIP.

Table XI
Annual NO_x: Calculation of the Percent Reduction in Projected 2009 Emissions from the 2002 Emissions by County

SOURCE CATEGORY	% EMISSION REDUCTION	CONTROLLED EMISSIONS ANNUAL (TONS PER YEAR) TOTAL OF ALL SECTORS		
COUNTY	**(2009-2002)/2002**	**2002**	**2009**	**2009-2002**
BERGEN	-40.2%	34,427	20,584	-13,843
ESSEX	-29.9%	29,551	20,729	-8,822
HUDSON	-16.8%	25,238	20,998	-4,240
MERCER	-17.6%	25,223	20,781	-4,442
MIDDLESEX	-35.3%	32,906	21,292	-11,614
MONMOUTH	-38.6%	21,222	13,025	-8,197
MORRIS	-41.7%	18,935	11,031	-7,904
PASSAIC	-40.2%	12,644	7,560	-5,084
SOMERSET	-40.7%	12,548	7,437	-5,112
UNION	-29.7%	23,555	16,556	-7,000
TOTAL for the New Jersey portion of the NY/NJ/ LI/CT Area	**-32.3%**	**236,251**	**159,990**	**-76,261**

The New Jersey portion of the New York /New Jersey/Long Island/Connecticut $PM_{2.5}$ nonattainment area meets the USEPA criterion for progress towards attainment and is eligible for establishing an early $PM_{2.5}$ transportation budget. The calculation methodologies used for the emissions are found in Appendix C.

ii. Early Transportation Conformity Emission Budgets for $PM_{2.5}$ and Annual NO_x

The early direct $PM_{2.5}$ and annual NO_x transportation conformity emission budgets are provided in Table XII. These budgets must be used for future transportation conformity determinations by the Metropolitan Planning Organizations once the USEPA finds them adequate or approves them.

Table XII
Transportation Conformity Emission Budgets

Transportation Planning Area	Direct $PM_{2.5}$ Emissions[(1)] (tons per year)	Annual NO_x Emissions (tons per year)
	2009	2009
North Jersey Transportation Planning Authority[(2)]	1,207	61,676
Delaware Valley Regional Planning Commission[(3)]	89	4,328

NOTES:
(1) Direct $PM_{2.5}$ consists of the sum of: SO_4, Organic Carbon, Elemental Carbon, particulate matter from Gasoline Vehicles, Lead, Brake particles and Tire particles.
(2) For Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset and Union counties.
(3) For Mercer County.

III. Carbon Monoxide Limited Maintenance Plan for Camden County and the Nine Not-Classified Areas

In 1995, the State demonstrated[42] to the USEPA that Camden County and the nine not-classified areas were in attainment of the carbon monoxide health standard by submitting an Attainment Demonstration and Maintenance Plan. The USEPA subsequently approved the State's Plan. This SIP revision establishes the second ten (10) year maintenance plan for these areas.

Attainment and maintenance of the carbon monoxide health standard represents a significant health benefit to the citizens of New Jersey. Carbon monoxide has significant health effects when present in levels above the standard. An odorless, colorless gas, carbon monoxide is readily absorbed by the body through the lungs and can reduce the amount of oxygen that reaches the heart, brain, and other tissues. Exposure to elevated carbon monoxide levels has been linked to adverse health effects and can be especially harmful to children, people with heart disease, and pregnant women. At moderate levels, carbon monoxide exposure has been linked to symptoms such as dizziness, nausea, fatigue, poor vision and concentration, headaches, and heart pains. Exposure to high levels of carbon monoxide may result in unconsciousness and death.

This SIP revision includes a consolidated Maintenance Plan for ten of New Jersey's eleven existing carbon monoxide maintenance areas that demonstrates continued compliance with the carbon monoxide health-based standard, describes how the State will continue to maintain the carbon monoxide NAAQS until the year 2017 in those areas, and provides a contingency plan that would be implemented should the State ever again violate the carbon monoxide NAAQS in those areas. The history of New Jersey's previous Carbon Monoxide SIP revisions is included as Appendix A.

A. Background

The Clean Air Act, 42 U.S.C. §7401 et seq. requires all areas of the nation to attain and maintain compliance with the NAAQS. These NAAQS are designed to protect public health and welfare from specific pollutants. For carbon monoxide, there are two primary NAAQS: an average 1-hour standard of 35 parts per million and a non-overlapping average 8-hour standard of 9 parts per million.

Carbon monoxide concentrations in New Jersey have not exceeded the 1-hour standard since the late 1970s. Typical 1-hour maximum concentrations in New Jersey in recent years have been less than 7 parts per million, well below the 35 parts per million level. The last exceedance of the 8-hour carbon monoxide NAAQS was in 1995. Typical 8-hour carbon monoxide levels are less than five parts per million. New Jersey's noncompliance with the 8-hour carbon monoxide NAAQS prior to 1996 was due primarily to highway sources and was limited to specific areas during stagnating meteorological conditions. A monitoring site is in violation of the 8-hour

[42] New Jersey Carbon Monoxide State Implementation Plan, Redesignation And Maintenance Plan For Camden County, New Jersey Department of Environmental Protection, September 29, 1995, and
New Jersey Carbon Monoxide State Implementation Plan, Redesignation and Maintenance Plan for the Nine Not-Classified Areas, New Jersey Department of Environmental Protection, September 29, 1995.

standard if it experiences two or more exceedances of the 9 parts per million standard within any calendar year.

Based on prior violations of the 8-hour carbon monoxide standard, New Jersey had eleven nonattainment areas, all of which have since been redesignated to attainment and are currently considered maintenance areas. New Jersey's three 8-hour carbon monoxide maintenance plans cover the following areas of the State:

1) Camden County – All of Camden County

2) Nine Not-Classified Areas - the City of Atlantic City (in Atlantic County), the City of Burlington (in Burlington County), the Borough of Freehold (in Monmouth County), the Town of Morristown (in Morris County), the Borough of Penns Grove (in Salem County), the City of Perth Amboy (in Middlesex County), the Borough of Somerville (in Somerset County), the Toms River Area (in Ocean County), and the City of Trenton (in Mercer County)

3) Northeastern New Jersey - Hudson, Essex, Bergen and Union Counties, and the municipalities of Clifton, Passaic and Paterson in Passaic County. This area is part of the New York City/Northern New Jersey/Long Island carbon monoxide maintenance area.

New Jersey's 8-hour carbon monoxide maintenance areas are shown in Figure IV.

The Camden County area's classification as a moderate nonattainment area reflected its 1989 design value of 9.7 parts per million. The 1994 8-hour average design value for Camden County was 6.9 parts per million, well below the standard of 9 parts per million. No violation of the 8-hour average carbon monoxide standard has occurred in any of the nine not-classified areas since 1986. The Camden County area and the Nine Not-Classified areas were redesignated by the USEPA as attainment areas in 1996.[43]

New Jersey's first ten-year maintenance plans[44] (which included contingency measures) for the Camden County area and the Nine Not-Classified areas covered a 12-year period (1995–2007).

New Jersey's eleventh carbon monoxide nonattainment area was redesignated by the USEPA as an attainment area in 2002. New Jersey's attainment demonstration submittal of August 7, 1998, for the Northern area showed that 8-hour average concentrations of carbon monoxide at New Jersey's monitoring sites in the Northern New Jersey carbon monoxide nonattainment area fell

[43] SIP Revision for the Attainment and Maintenance of the Carbon Monoxide National Ambient Air Quality Standards, Redesignation Request and Maintenance Plan for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Nonattainment Area, New Jersey Department of Environmental Protection, January 15, 2002.

[44] New Jersey Carbon Monoxide State Implementation Plan, Redesignation And Maintenance Plan For Camden County, New Jersey Department of Environmental Protection, September 29, 1995, and
New Jersey Carbon Monoxide State Implementation Plan, Redesignation and Maintenance Plan for the Nine Not-Classified Areas, New Jersey Department of Environmental Protection, September 29, 1995.

below the standard beginning in 1996.[45] The first ten-year maintenance plan and contingency measures for this area covered the 12-year period, 2002-2014.

This consolidated Limited Maintenance Plan covers the second follow-on ten-year maintenance plans for the Camden County and Nine Not-Classified Carbon Monoxide Maintenance Areas. The Northern New Jersey Carbon Monoxide Maintenance Area is not addressed in this Limited Maintenance Plan. A second ten-year maintenance plan that will cover the years 2015-2024 for the northeastern New Jersey Carbon Monoxide Maintenance Area is expected to be proposed in 2012. Elsewhere in this SIP revision, the carbon monoxide budgets for the northern New Jersey Carbon Monoxide Maintenance Area are being updated.

B. Air Quality Update

Carbon monoxide levels have improved dramatically in New Jersey over the past thirty years and are currently about one-half that of the standard, Figure II. The last time the carbon monoxide 8-hour NAAQS was exceeded in New Jersey was in January of 1995. Figure II shows the second highest 8-hour value recorded throughout the monitoring network during each year.

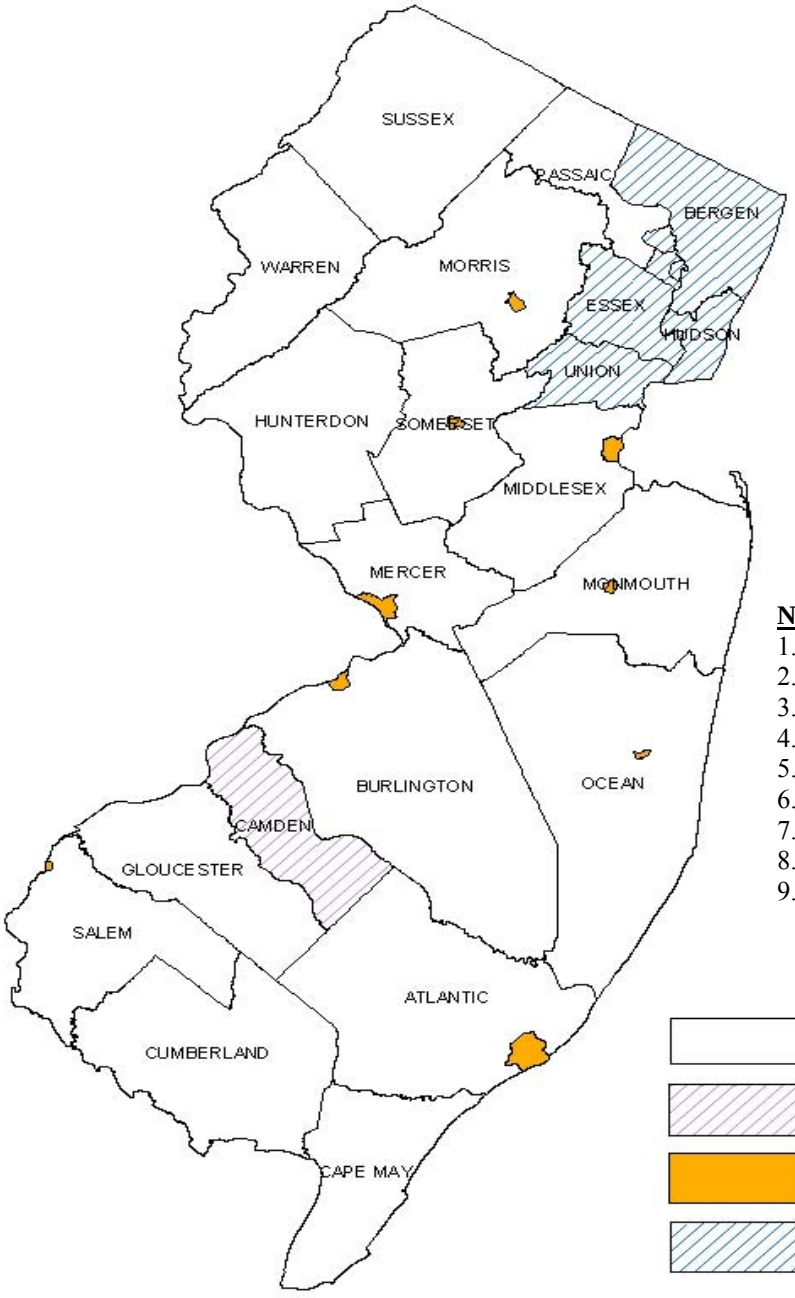
A design value is based on monitored readings used by the USEPA to determine an area's air quality status. New Jersey's carbon monoxide design values for the years 2002-2003 (see Table XIII) are all well below 7.65 parts per million, an eligibility requirement to qualify for a Limited Maintenance Plan.[46]

[45] SIP Revision for the Attainment and Maintenance of the Carbon Monoxide National Ambient Air Quality Standards, Attainment Demonstration for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Nonattainment Area, New Jersey Department of Environmental Protection, August 7, 1998.

[46] USEPA, Memorandum from Joseph Paisie (OAQPS) to Regional Air Branch Chiefs, "Limited Maintenance Plan Option for Non-Classifiable CO Nonattainment Areas," 10/6/1995.

Figure IV

New Jersey Carbon Monoxide Maintenance Areas



Nine Not-Classified Areas

1. Atlantic City
2. Burlington City
3. Freehold Boro
4. Morristown
5. Penns Grove
6. Perth Amboy
7. Somerville (in
8. Toms River Area
9. Trenton

In Attainment

Camden County

Nine Not-Classified

Northern New Jersey

Table XIII
Design Values for Carbon Monoxide in New Jersey
(8-hour standard - 9 parts per million)

Monitoring Location	2002-2003 Design Value (parts per million)
Ancora S.H.	0.8
Burlington	2.5
Camden Lab(1)	2.1
East Orange	4.2
Elizabeth	4.4
Elizabeth Lab	3.1
Fort Lee(2)	2.6
Freehold	2.2
Hackensack	3.4
Jersey City	2.9
Morristown	2.4
Newark Lab(3)	2.9
Perth Amboy	2.5

Notes:
(1) Data not available October-December 2003
(2) Data not available July-August 2002
(3) Data not available July-December 2003

C. The USEPA Guidance and Requirements for Limited Maintenance Plans

42 U.S.C. §7505a requires that, eight years after redesignation of any area as an attainment area, states submit an additional revision of the SIP for maintaining the NAAQS for ten years beyond the initial ten-year maintenance period. Two of New Jersey's maintenance plans (the Camden County area and the Nine Not-Classified areas) expire in 2007. New Jersey has established a consolidated Limited Maintenance Plan that would cover all of the second ten-year period for both areas.

The USEPA issued guidance in 1995 describing the eligibility criteria and planning requirements for limited maintenance plans.[47] The USEPA Region II provided supplemental information specific to New Jersey in correspondence dated January 27, 2005.[48] USEPA Region II provided additional guidance.[49]

Areas are eligible for limited maintenance plans only if current carbon monoxide design values are at or below 7.65 parts per million (i.e., set at 85 percent of the 8-hour NAAQS of 9 parts per million). Table XIII demonstrates that this is the case for all of the sites located in the three New

[47] Op cit, note 43.
[48] USEPA, Electronic mail from Henry Feingersh of Region II to Christine Schell, NJDEP, Bureau of Air Quality Planning, January 27, 2005, 8:45 am.
[49] NJDEP and USEPA, Region II, Conference call, September 23, 2005.

Jersey's carbon monoxide maintenance areas. In addition to an analysis of monitoring data to demonstrate eligibility, approvable Limited Maintenance Plans must contain the following planning elements:

1) **Attainment Inventory**: New Jersey is required to submit an attainment inventory (summary of wintertime carbon monoxide emissions data by county and sector) to the USEPA that coincides with a year where monitoring data show attainment.[50] Emission projections for the maintenance period are not required.

2) **Maintenance Demonstration**: The following elements provide adequate assurance of maintenance:
   - Continued applicability of Prevention of Significant Deterioration requirements;
   - Any control measures already in the SIP.

3) **SIP Commitments**: New Jersey must commit to:
   - Maintain a monitoring network to verify attainment through the maintenance period;
   - Continue to perform project-level transportation conformity reviews (area wide emission "budget tests" are not required for limited maintenance plans); and,
   - Submittal of a full maintenance plan if future design values in an area exceed 7.65 parts per million.

4) **Contingency Plan**: New Jersey must document the measures that will be promptly adopted and implemented if a violation (or exceedance) of the NAAQS occurs during the maintenance period.

5) **Conformity Determinations**: According to the 1995 USEPA guidance document for Limited Maintenance Plans, the Transportation Conformity Rule and the General Conformity Rule apply to nonattainment areas and maintenance areas.[51,52] The guidance document states that emissions budgets in Limited Maintenance Plan areas may be treated as not constraining for purposes of conformity. This is true for the length of the maintenance periods because it is unreasonable to expect that the area would experience so much growth in that period that a violation of the carbon monoxide NAAQS would result.

   Once a Limited Maintenance Plan has been approved for these areas, it will no longer be necessary for the Metropolitan Planning Organizations to perform numerical regional analyses to demonstrate transportation conformity for Transportation Plans and Transportation Improvement Programs. The State is aware that project-level carbon monoxide evaluation of transportation projects (project-level conformity) still needs to be performed in areas with approved Limited Maintenance Plans. As stated previously, a transportation conformity budget will still be required for the northeastern New Jersey carbon monoxide maintenance area, and as such, a revised budget is included as part of this submittal.

[50] Ibid.
[51] 58 Fed. Reg., 62188 (November 24, 1993).
[52] 58 Fed. Reg., 63214 (November 30, 1993).

D. 8-Hour Carbon Monoxide Maintenance Plan

The first ten-year maintenance plans and contingency measures for the Camden County and the nine not-classified carbon monoxide maintenance areas are summarized in Table XIV.

Table XIV
New Jersey Carbon Monoxide Maintenance Plan and Contingency Measure History

Camden County	Nine Not-Classified Areas
Maintenance Plan Federal Motor Vehicle Control Program Reformulated Gasoline Basic Inspection and Maintenance Program	**Maintenance Plan** Federal Motor Vehicle Control Program Reformulated Gasoline Basic Inspection and Maintenance Program
Contingency Measure Enhanced Inspection and Maintenance Program	**Contingency Measure** Enhanced Inspection and Maintenance Program
Triggering Mechanism for Contingency Measure Contingency measure to be implemented as quickly as practicable	**Triggering Mechanism for Contingency Measure** Contingency measure to be implemented as quickly as practicable

Each of these elements has been included in New Jersey's Second Ten-Year Carbon Monoxide Limited Maintenance Plan for Camden County and the nine not-classified areas. This Limited Maintenance Plan consolidates Maintenance Plans for these 10 maintenance areas.

1. Attainment Inventory

The USEPA's Limited Maintenance Plan guidance requires states to develop an attainment emission inventory identifying a level of emissions sufficient to attain the NAAQS. The inventory should represent "typical winter day" emissions during a time period coincident with monitored data showing attainment. The USEPA required New Jersey to provide an attainment inventory (point, area, and mobile) for the periodic inventory year 2002. Table XV provides a summary of the 2002 wintertime summary carbon monoxide emissions data for each sector for each county included in one of the ten maintenance areas.

New Jersey's carbon monoxide attainment inventory was submitted to the USEPA on September 29, 1995 (1990 base year carbon monoxide emission inventory).[53] Given the amount of time that has passed since the submittal of New Jersey's carbon monoxide attainment inventory, New Jersey thought it more appropriate to submit our most recent carbon monoxide inventory values (2002 inventory) for the purposes of the Limited Maintenance Plan. Since 2002 is a calendar year that had monitoring data that demonstrates attainment, no projection inventories are required over the years of the maintenance period. A summary of the wintertime carbon monoxide emissions, as required by the USEPA, has been provided in this submittal. In addition, the State's entire 2002 base year inventory, which outlines the method and calculation

[53] New Jersey Carbon Monoxide State Implementation Plan, Redesignation and Maintenance Plan for the Nine Not-Classified Areas, New Jersey Department of Environmental Protection, September 29, 1995.

used to develop the carbon monoxide wintertime inventory, is included in this submittal.

County level data was used because:

- Estimating emissions from areas smaller than counties would not be statistically significant.
- Much of the activity data upon which the area source and nonroad mobile source inventory estimates are based were developed at the county-level. Therefore, some proportional adjustment factor would need to be applied to the county-level total emissions for those sectors to represent the selected municipalities.
- The vehicle miles traveled estimates used to develop the onroad mobile source inventory would require similar adjustments. These adjustments would necessarily be based on population or economic statistical data and, as such, would simply represent a proportion of the county-level estimate rather than specific municipality data.
- All growth and control factors applied to develop the future year inventories are estimated on a county-wide basis. Therefore, the same proportional change in emissions would be applied to estimate the projected future year inventories regardless of the assumptions used to represent the attainment year base case.

The maintenance areas are then totaled (partial counties are included as full counties for summary purposes). Please note that these numbers are part of the New Jersey's 2002 Periodic Emission Inventory, which is included elsewhere as a part of this SIP revision. Details on how the wintertime carbon monoxide numbers for each sector were developed are outlined in the State's inventory submittal.

Table XV
New Jersey Wintertime Carbon Monoxide Emissions for 2002
(tons per winter day)

County	Point Sources	Area Sources	Onroad Mobile Sources	Nonroad Mobile Sources	TOTAL
Atlantic	0.48	62.98	153.15	21.57	238.18
Burlington	1.42	59.62	308.90	54.00	423.94
Mercer	1.46	14.32	224.90	43.01	283.69
Middlesex	8.27	6.34	531.04	107.85	653.50
Monmouth	0.72	30.42	423.04	78.43	532.61
Morris	1.23	46.59	393.14	97.30	538.26
Ocean	1.11	47.69	257.31	40.31	346.42
Salem	2.21	13.72	50.24	6.97	73.14
Somerset	1.17	11.65	211.93	47.55	272.30
Nine Not-Classified Areas Total	**18.07**	**293.33**	**2,553.65**	**496.99**	**3,362.04**
Camden County Area Total	**3.30**	**18.42**	**269.10**	**53.39**	**344.21**

2. Maintenance Demonstration

The 1995 USEPA guidance document[54] states that the maintenance demonstration requirement is considered to be satisfied if the monitoring data show that the area is meeting the air quality criteria for limited maintenance areas (7.65 parts per million or 85 percent of the carbon monoxide NAAQS). Emission projections for the maintenance period are not required. According to the guidance document, the USEPA believes that if an area begins a maintenance period at or below 85 percent of the exceedance levels, then the continued applicability of Prevention of Significant Deterioration requirements, any control measure already in the SIP, and federal measures should provide adequate assurance of maintenance over the second ten-year maintenance period.

Table XIII shows that all of the design values are well below 7.65 parts per million. As such, New Jersey is not required to include emission projections in the Limited Maintenance Plan. New Jersey commits to continued implementation of its Prevention of Significant Deterioration program and all other federal and state measures already implemented as part of the carbon monoxide SIP.

3. Monitoring Network

To verify that carbon monoxide maintenance areas remain in attainment over the maintenance period, New Jersey will continue to operate an appropriate air monitoring network. New Jersey's current carbon monoxide monitoring network is shown in Figure V. The air monitoring results will detect any changes in the ambient air quality, as well as assist the State in determining whether or not it is necessary to implement any contingency measures. The State will continue to work with the USEPA through the air monitoring network review process, as required by 40 CFR Part 58, to determine:

- The adequacy of the carbon monoxide monitoring network;
- If additional monitoring is needed; and,
- When monitoring can be discontinued.

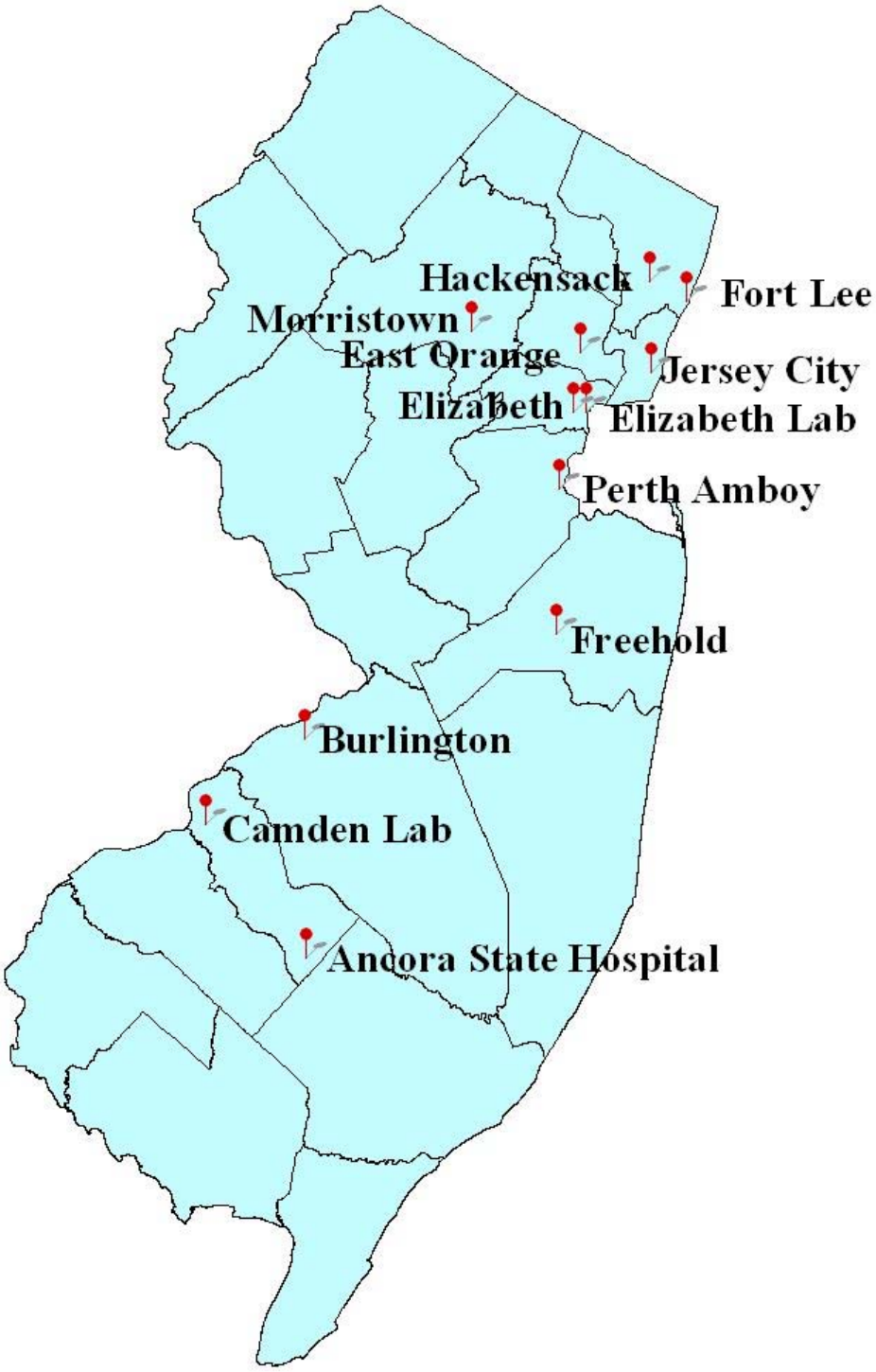
These determinations must be consistent with the section 105 air grant process.[55] Air monitoring data will continue to be quality assured according to the requirements in the USEPA regulations.[56]

4. Verification of Continued Attainment

To track the progress of the maintenance plan, the State will review the carbon monoxide concentrations from its monitoring sites each year. If design values in any maintenance area exceed 7.65 parts per million (the eligibility requirement for Limited Maintenance Plan areas),

[54] Ibid
[55] 42 §U.S.C. 7405.
[56] 40 CFR 58.

Figure V
New Jersey Carbon Monoxide Monitoring Network (2004)



the NJDEP will coordinate with USEPA Region II to:

- Verify the validity of the data;
- Evaluate whether the data should be excluded based on an "exceptional event"; and,
- If warranted based on the data review, develop a full maintenance plan for the affected maintenance area(s), if deemed necessary.

5. Contingency Plan

42 U.S.C. §7505a(d) requires that maintenance plans include contingency provisions. The purpose of the contingency provisions is to assure that any violations of the NAAQS that occur after the redesignation of an area to attainment will be corrected promptly.[57] The USEPA issued guidance describing the contents of the contingency plan.[58] This guidance specifies that the contingency plan should clearly identify the measure(s) to be adopted, a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. The USEPA has also recommended that the State specify triggers that will be used to determine when the contingency measure(s) need to be implemented. The triggers specified in the previous Maintenance Plan are included in this Limited Maintenance Plan.

Contingency Measure Triggers

If air quality monitoring data indicate that either of the carbon monoxide NAAQS were exceeded, New Jersey will first analyze available data regarding the air quality, meteorology, and related activities in the area to determine the cause of the violation. After this analysis is complete, if it is determined that the violation was caused by non-local motor vehicle usage (i.e., not due to a local traffic problem, a special event, or stationary sources, and not occurring during the same meteorological episode as the first exceedance), then the State will institute the contingency measures described in this SIP revision.

Contingency Measures and Timeframes

42 U.S.C. §7505a(d) requires that, at a minimum, a contingency plan include reinstatement of all measures that were contained in the SIP before redesignation of the area as an attainment area. Table XIV outlines the contingency measures from the original maintenance plan for the area. The plans included implementation of an enhanced I/M program. This program is fully operational and the State commits to continue to meet the performance standard for an enhanced I/M program in an effort to maintain the carbon monoxide NAAQS.

The State continues to commit to implementing a program to reduce truck idling emissions. If it becomes necessary to reduce carbon monoxide levels in the future, New Jersey will work with the local Metropolitan Planning Organizations to implement transportation control measures such as Transportation Demand Management measures, arterial and signal improvement projects, bicycle projects, and various transit related projects. Since the implementation of

[57] 42 U.S.C. §7505a(d).
[58] USEPA, Memorandum from John Calcagni, Director, Air Quality Management Division, to Regional Air Directors, "Procedures for Processing Requests to Redesignate Areas to Attainment," September 4, 1992, page 12.

potential contingency measures would not be expected to take place until well in the future, providing the specific details of the measures is not practicable. The most appropriate contingency measures may be significantly different from the measures mentioned above due to technological, societal, economic, and political factors that are impossible to predict.

6. Transportation Conformity

According to the 1995 USEPA guidance document for Limited Maintenance Plans[59], the Transportation Conformity Rule and the General Conformity Rule apply to nonattainment areas and maintenance areas operating under maintenance plans.[60,61] The guidance document also states that emission budgets in Limited Maintenance Plan areas may be treated as not constraining for the length of the initial maintenance period because it is unreasonable to expect that such an area would experience so much growth in that period that a violation of the carbon monoxide NAAQS would result. New Jersey's consolidated Limited Maintenance Plan covers the second maintenance periods for two of New Jersey's carbon monoxide maintenance areas. According to correspondence from USEPA Region II, a budget test (outlined in the Transportation Conformity Rule) is not required for limited maintenance plans. The NJDEP will comply with the requirement to conduct a project-level carbon monoxide evaluation of transportation projects (project-level conformity).

Consistent with the discussion, the NJDEP will use the interagency consultation process to:

1) Inform the New Jersey Department of Transportation and Metropolitan Planning Organizations that, upon approval of the limited maintenance plans, carbon monoxide emission budgets will no longer be constraining for transportation conformity because of the low levels of emissions and expected growth rates during the duration of the limited maintenance periods. Once the Limited Maintenance Plan is approved, regional transportation conformity is presumed to be satisfied, with no need for quantitative comparisons to budgets for the second ten-year maintenance periods.
2) Ensure that project-level carbon monoxide evaluations of transportation projects (i.e., project-level conformity, as described in 40 CFR 93.116) are carried out in each area as part of environmental reviews.[62]

A transportation conformity budget is still required for the Northeastern New Jersey carbon monoxide maintenance area, and as such, a revised budget is included as part of this submittal.

[59] USEPA, Memorandum from Joseph Paisie (OAQPS) to Regional Air Branch Chiefs, "Limited Maintenance Plan Option for Non-Classifiable CO Nonattainment Areas," October 6, 1995.
[60] 58 Fed. Reg., 62188 (November 24, 1993).
[61] 58 Fed. Reg. 63214 (November 30, 1993).
[62] Environmental review documents are prepared when required by the National Environmental Policy Act.

IV. 2002 Periodic Emission Inventory

A. Background

1. Statutory and Regulatory Background

42 U.S.C. §7410 (a)(2)(F) requires the submission by states to the USEPA of periodic reports on the nature and amounts of emissions and emissions related data. For example, 42 U.S.C. §7511a.(a)(3)(A) required states to submit an emission inventory every three years for 1-hour ozone nonattainment areas beginning in 1993. The inventories are required to include all ozone precursors including VOCs, NO_x, and carbon monoxide. Similarly, 42 U.S.C. §7512a.(a)(5) required States to submit an inventory every three years for carbon monoxide nonattainment areas for the same source classes as ozone, except biogenic sources. As part of the NO_x SIP Call Rule (40 CFR 51.121), the USEPA established emissions reporting requirements to be included in the SIPs submitted by the affected states.

In 2002, the USEPA promulgated the Consolidated Emission Reporting Rule, 40 CFR Part 51, Subpart A, that

- Consolidated the various emissions reporting requirements that already existed;
- Established new reporting requirements related to $PM_{2.5}$, its precursors (NH_3, SO_x, NO_x, and VOC) and regional haze;
- Established new requirements for the statewide reporting of area source and mobile source emissions; and,
- Required two types of inventories – annual inventories and three year cycle inventories.

Figures VI and VII represent New Jersey's nonattainment areas for 8-hour ozone and $PM_{2.5}$, respectively, and Figure IV represents the maintenance areas for carbon monoxide. The 2002 periodic emission inventory is based on the 8-hour ozone standard (0.08 parts per million) as the 1-hour ozone standard (0.12 parts per million) was revoked by the USEPA on June 15, 2005.[63]

2. Emission Inventory Overview

The 2002 Periodic Emission Inventory is a compilation of the emissions from sources of biogenic (natural) and anthropogenic (human-made) volatile organic chemical (VOC), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 10 micrometers in diameter (PM_{10}), particulate matter five micrometers or less in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), and ammonia (NH_3) in the outdoor air.[64] The sources are divided into five sectors and each making up one component of the inventory: point sources, area (nonpoint) sources, onroad sources, nonroad sources, and biogenic sources.

[63] 70 Fed. Reg. 44470 (August 3, 2005).

[64] SO_2 has been reported in the inventory instead of SO_x as required in the Consolidated Emissions Reporting Rule because the USEPA MOBILE and NONROAD models and the majority of USEPA guidance on emission factors is based on SO_2, not SO_x. In addition, the USEPA National Emissions Inventory (NEI) reports SO_2.

Figure VI

8-hour Ozone Standard Multi-State Nonattainment Areas

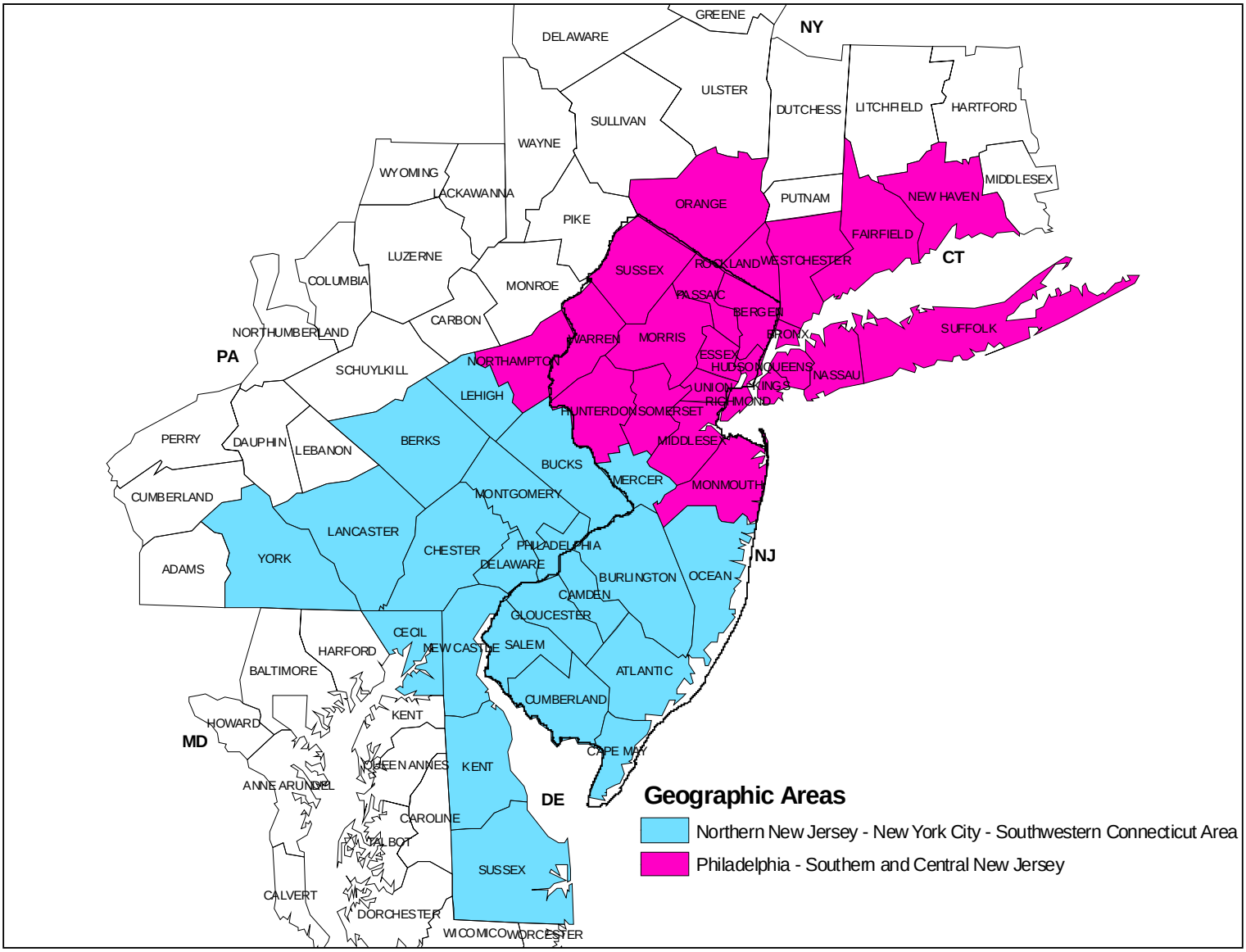
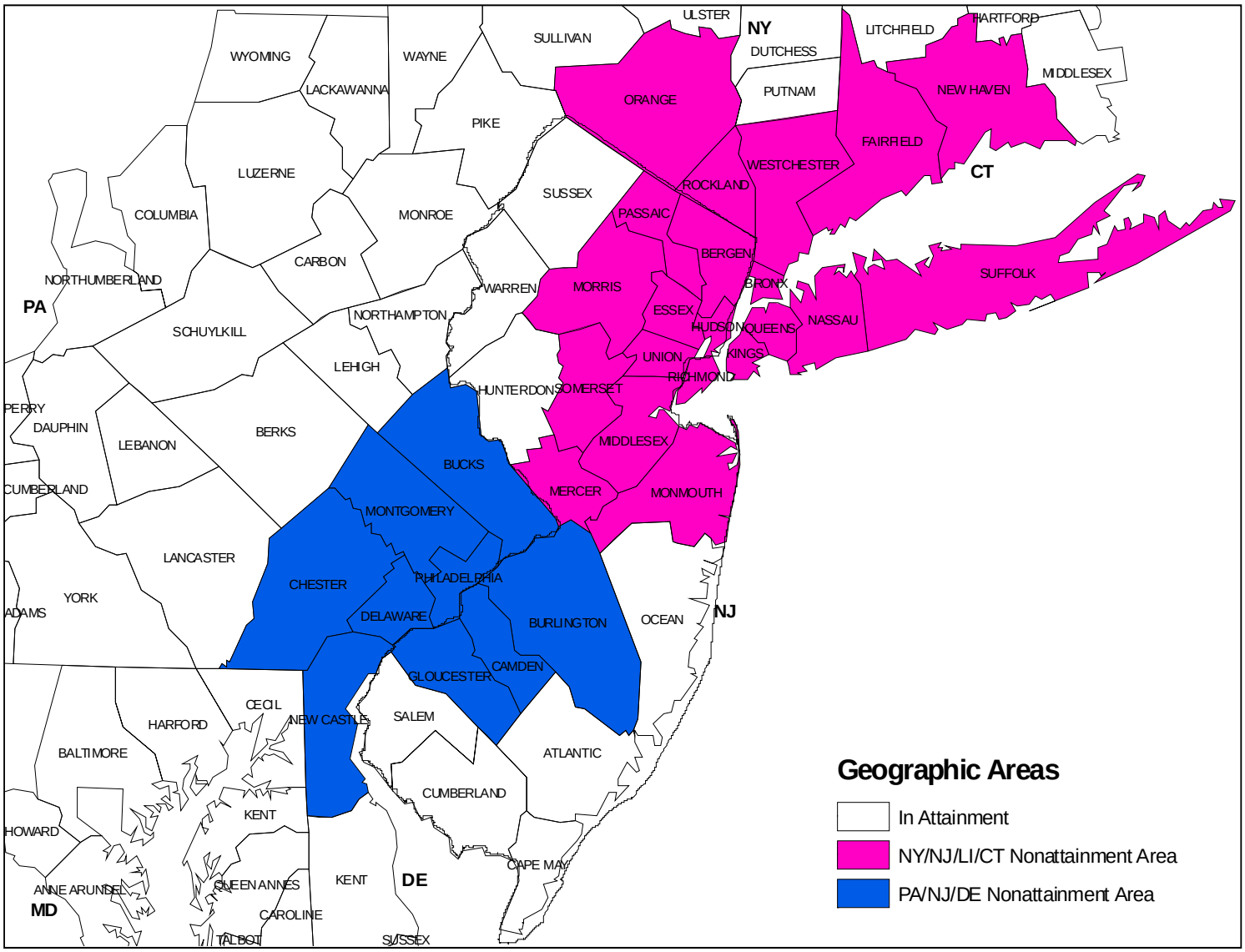


Figure VII

USEPA Designations of Multi-State Nonattainment Areas for PM2.5



This report includes the 2002 periodic emission inventory for the parameters listed in Table XVI. Appendix D contains a description of the 2002 periodic emission inventory and the methodologies used for collecting and calculating emission data for New Jersey for 2002. This appendix also contains twenty-five (25) attachments that provide supplemental information for evaluating the inventory.

Table XVI
2002 Inventories Prepared

	Summer Day(1)	Winter Day(2)	Annual Emissions
VOC	√		√
NO_x	√		√
CO	√	√	√
PM_{10}		√	√
$PM_{2.5}$		√	√
SO_2			√
NH_3			√

NOTES:
(1) Average daily emissions for a typical summer work week day.
(2) Average daily emissions for a typical winter work week day.

3. Emission Inventory Summary

A summary of the 2002 Periodic Emission Inventory for New Jersey is presented in Table XVII by pollutant and source sector. Table XVIII presents the inventory data by pollutant and county. Table XIX presents the inventory data by pollutant, source sector, and county. A series of figures showing the top fifteen pollutants by Source Classification Code (SCC) for each pollutant and source sector can be found in Appendix D, Attachment 1.

Note, the summary tables, graphs, and the detailed county source sector tables found in the attachments to this report contain adjusted values for fugitive dust. Discussion on the fugitive dust inventory and the adjustment can be found in Appendix D, Attachment 2.

Table XVII
2002 Statewide Emission Inventory by Source Sector and Pollutant

	VOC			NO_x		
Source Sector	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**
Point	113.15	30,169	6.41%	280.36	52,121	14.77%
Area	369.83	127,673	27.12%	35.92	26,742	7.58%
Onroad	274.74	106,589	22.65%	558.66	206,280	58.44%
Nonroad	220.60	70,407	14.96%	231.56	66,443	18.82%
Biogenic	371.95	135,851	28.86%	3.78	1,382	0.39%
Total in State	1,350.27	470,689		1,110.28	352,968	

	Carbon Monoxide			PM_{10}[(1)]	
Source Sector	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**	**Tons per Year**	**% of Total Annual Inventory**
Point	91.33	13,254	0.60%	5,555	13.37%
Area	66.45	94,067	4.26%	24,760	59.61%
Onroad	2,856.37	1,421,004	64.40%	4,718	11.36%
Nonroad	2,497.80	665,944	30.18%	6,505	15.66%
Biogenic	34.09	12,450	0.56%	0	0.00%
Total in State	5,546.04	2,206,719		41,538	

	$PM_{2.5}$[(1)]		SO_2		NH_3	
Source Sector	**Tons per Year**	**% of Total Inventory**	**Tons per Year**	**% of Total Inventory**	**Tons per Year**	**% of Total Inventory**
Point	4,868	16.02%	61,231	64.68%	38	0.15%
Area	16,230	53.42%	10,876	11.49%	8,005	31.38%
Onroad	3,361	11.07%	5,793	6.12%	7,469	29.27%
Nonroad	5,922	19.49%	16,772	17.71%	970	3.80%
Biogenic	0	0.00%	0	0.00%	9,032	35.40%
Total in State	30,381		94,672		25,514	

NOTE:

(1) These totals include adjusted emissions from fugitive dust categories. See Attachment 2 for further discussion.

Table XVIII
2002 Statewide Emission Inventory by County and Pollutant

	VOC		NO_x		Carbon Monoxide	
County	**Tons per Summer Day**	**Tons per Year**	**Tons per Summer Day**	**Tons per Year**	**Tons per Summer Day**	**Tons per Year**
Atlantic	74.67	27,426	33.81	9,706	231.81	85,555
Bergen	105.32	34,106	94.16	34,452	687.81	261,862
Burlington	87.21	31,814	58.36	18,214	297.22	126,456
Camden	65	22,629	41.44	15,119	270.18	107,408
Cape May	52.34	19,481	34.5	8,636	138.03	50,041
Cumberland	54.2	19,375	30.04	7,829	112.26	40,088
Essex	68.06	22,580	89.32	29,578	377.56	152,468
Gloucester	84.24	30,076	42.19	14,615	183.78	74,719
Hudson	46.01	15,111	95.68	25,367	167.38	67,897
Hunterdon	28.22	10,636	32.07	8,651	122.35	50,996
Mercer	46.45	16,068	81.81	25,295	231.25	90,194
Middlesex	104.31	34,222	123.5	33,048	554.35	212,020
Monmouth	91.54	32,769	57.2	21,301	444.94	180,921
Morris	69.79	25,153	50.34	18,978	443.13	174,989
Ocean	103.91	37,326	38.56	13,676	314.77	125,240
Passaic	49.71	17,014	34.46	12,682	206.76	85,648
Salem	34.63	11,726	31.01	7,727	75.03	26,533
Somerset	42.74	14,963	36.61	12,602	228.92	88,817
Sussex	34.9	14,544	10.86	4,140	84.06	43,747
Union	77.8	22,468	73.69	23,906	286.34	117,897
Warren	29.22	11,204	20.7	7,451	87.86	43,226
Total in State	1350.27	470,689	1110.28	352,968	5546.07	2,206,719

Table XVIII (cont.)
2002 Statewide Emission Inventory by County and Pollutant

County	PM_{10}[(1)] Tons per Year	$PM_{2.5}$[(1)] Tons per Year	SO_2 Tons per Year	NH_3 Tons per Year
Atlantic	2,282	1,889	886	823
Bergen	2,164	1,540	2155	2390
Burlington	3,209	2,362	3568	1535
Camden	1,823	1,382	2038	1238
Cape May	1,468	1,254	13409	334
Cumberland	1,467	1,201	3281	652
Essex	1,682	1,280	4597	1934
Gloucester	2,103	1,514	7275	1006
Hudson	2,690	1,825	21653	1325
Hunterdon	1,426	908	695	934
Mercer	1,613	1,062	15594	1032
Middlesex	2,561	1,643	2395	2122
Monmouth	2,520	1,781	1947	1725
Morris	2,473	1,812	1529	1464
Ocean	3,091	2,341	1196	1291
Passaic	1,242	881	974	1126
Salem	1,234	927	5504	657
Somerset	1,435	797	744	1092
Sussex	1,849	1,449	733	674
Union	1,569	1,330	3856	1467
Warren	1,629	1,205	643	688
Total in State	41,538	30,381	94672	25514

NOTES:

(1) These totals include adjusted emissions from fugitive dust categories. See Attachment 2 of this report for further discussion.

Table XIX
2002 Statewide Emission Inventory by County and Source Sector

County	VOC Tons per Summer Day					VOC Tons per Year				
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic
Atlantic	0.15	11.04	12.85	10.25	40.38	52	5,492	3,613	3,521	14,748
Bergen	5.72	36.86	36.09	22.05	4.60	773	11,243	14,048	6,361	1,681
Burlington	4.02	17.54	15.80	10.01	39.84	927	7,057	6,278	3,000	14,552
Camden	1.23	22.68	13.80	7.23	20.06	453	7,228	5,512	2,110	7,326
Cape May	0.20	5.26	4.72	22.61	19.55	39	2,474	1,348	8,480	7,140
Cumberland	0.46	8.93	5.37	11.03	28.41	102	3,208	1,492	4,196	10,377
Essex	2.95	31.53	18.26	11.92	3.40	791	9,568	7,238	3,739	1,244
Gloucester	32.01	20.39	9.10	5.91	16.83	11,560	7,032	3,650	1,686	6,148
Hudson	7.33	21.09	9.10	5.22	3.27	2,104	6,628	3,567	1,617	1,195
Hunterdon	0.64	5.49	5.99	3.66	12.44	144	2,468	2,441	1,038	4,545
Mercer	2.13	13.06	11.60	7.01	12.65	446	4,445	4,636	1,922	4,619
Middlesex	16.08	34.87	26.00	14.58	12.78	4,366	10,594	10,478	4,115	4,669
Monmouth	1.37	24.65	22.26	21.26	22.00	287	8,477	8,973	6,996	8,036
Morris	1.27	20.81	18.87	15.09	13.75	309	7,947	7,662	4,211	5,024
Ocean	0.26	24.01	14.30	21.54	43.80	76	7,746	5,792	7,714	15,998
Passaic	1.99	19.84	10.22	6.62	11.04	253	6,537	4,109	2,081	4,034
Salem	4.92	3.47	4.23	3.37	18.64	1,034	1,516	1,205	1,162	6,809
Somerset	0.73	12.29	10.65	6.87	12.20	224	4,075	4,311	1,898	4,455
Sussex	0.25	5.69	4.62	3.86	20.48	38	3,656	1,881	1,490	7,479
Union	26.56	25.26	15.92	7.75	2.31	5,382	7,652	6,354	2,237	843
Warren	2.88	5.07	4.99	2.78	13.50	809	2,631	2,001	832	4,931
Total in State	113.15	369.83	274.74	220.60	371.95	30,169	127,673	106,589	70,407	135,851

Table XIX (cont.) – 2002 Statewide Emission Inventory by County and Source Sector

County	NO_x Tons per Summer Day					NO_x Tons per Year				
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic
Atlantic	1.67	1.17	24.50	6.26	0.21	129	964	6,764	1,771	78
Bergen	3.64	3.83	63.24	23.38	0.07	988	2,815	23,917	6,707	25
Burlington	12.35	1.77	31.10	12.88	0.26	1,273	1,424	11,644	3,776	97
Camden	2.69	2.10	27.00	9.44	0.21	776	1,523	10,074	2,669	77
Cape May	19.15	0.42	8.82	5.92	0.19	3,819	357	2,433	1,959	68
Cumberland	10.50	0.65	10.61	7.94	0.34	1,778	469	2,883	2,574	125
Essex	16.18	3.31	44.06	25.70	0.07	2,441	2,436	16,537	8,137	27
Gloucester	14.48	1.01	18.50	8.01	0.19	4,645	800	6,899	2,200	71
Hudson	51.61	2.24	21.05	20.71	0.07	9,776	1,735	7,853	5,976	27
Hunterdon	9.47	0.54	17.17	4.70	0.19	491	424	6,444	1,223	69
Mercer	47.87	1.72	22.70	9.32	0.20	13,034	1,257	8,505	2,427	72
Middlesex	44.47	3.33	58.00	17.54	0.16	3,651	2,343	22,147	4,849	58
Monmouth	0.86	2.23	38.15	15.74	0.22	240	1,806	14,860	4,316	79
Morris	1.18	2.40	35.06	11.58	0.12	284	1,752	13,748	3,151	43
Ocean	3.68	2.39	24.65	7.57	0.27	395	1,507	9,538	2,138	98
Passaic	0.68	1.79	23.01	8.88	0.10	122	1,361	8,748	2,413	38
Salem	15.26	0.31	11.91	3.21	0.32	3,267	227	3,185	932	116
Somerset	3.60	1.44	23.85	7.57	0.15	313	1,048	9,090	2,097	54
Sussex	0.21	0.57	7.47	2.46	0.15	39	495	2,936	615	55
Union	18.88	2.26	32.22	20.25	0.08	4,080	1,621	12,294	5,883	28
Warren	1.93	0.47	15.60	2.48	0.22	580	379	5,782	631	79
Total in State	280.36	35.92	558.66	231.56	3.78	52,121	26,742	206,280	66,443	1,382

Table XIX (cont.) – 2002 Statewide Emission Inventory by County and Source Sector

County	Carbon Monoxide Tons per Summer Day					Carbon Monoxide Tons per Year				
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic
Atlantic	0.40	2.66	155.53	70.26	2.96	66	10,726	53,885	19,798	1,080
Bergen	2.45	2.07	324.50	358.25	0.54	619	1,453	166,589	93,002	199
Burlington	1.67	1.97	168.90	121.35	3.33	413	9,709	83,768	31,350	1,216
Camden	3.38	6.89	145.90	112.44	1.57	1,154	3,789	72,489	29,402	574
Cape May	2.19	0.66	53.58	80.06	1.54	311	4,145	18,758	26,265	562
Cumberland	1.59	1.13	56.91	50.35	2.28	126	3,196	19,994	15,941	831
Essex	3.80	2.40	187.93	182.98	0.45	624	1,306	96,967	53,407	164
Gloucester	3.34	1.54	99.80	77.69	1.41	1,029	4,513	49,458	19,203	516
Hudson	9.51	1.22	87.49	68.72	0.44	2,058	896	44,767	20,015	161
Hunterdon	6.47	1.03	64.94	48.31	1.60	259	3,973	34,283	11,896	585
Mercer	1.58	1.37	122.70	104.18	1.42	323	2,567	61,101	25,685	518
Middlesex	34.55	2.54	287.54	228.84	1.16	3,034	1,309	149,288	57,965	424
Monmouth	1.35	1.79	227.22	212.60	1.98	381	5,252	118,952	55,614	722
Morris	2.31	2.35	209.14	227.91	1.42	266	8,121	109,947	56,136	519
Ocean	1.29	29.78	135.96	143.85	3.89	271	10,563	72,072	40,914	1,420
Passaic	0.45	1.23	105.86	98.09	1.13	68	2,985	55,414	26,769	412
Salem	2.37	0.57	49.04	21.42	1.63	487	2,389	17,071	5,991	595
Somerset	6.09	1.16	112.52	107.75	1.40	226	2,079	59,270	26,731	511
Sussex	0.34	1.80	42.35	37.57	2.00	83	8,995	23,055	10,883	731
Union	4.12	1.11	162.44	118.31	0.36	1,012	794	84,178	31,780	133
Warren	2.08	1.19	56.12	26.89	1.58	444	5,306	29,700	7,198	578
Total in State	91.33	66.45	2,856.37	2,497.80	34.09	13,254	94,067	1,421,004	665,944	12,451

Table XIX (cont.) – 2002 Statewide Emission Inventory by County and Source Sector

County	PM_{10}[(1)] Tons per Year					$PM_{2.5}$[(1)] Tons per Year				
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic
Atlantic	17	1,863	154	248	NA	19	1,541	104	225	NA
Bergen	135	981	524	524	NA	149	537	376	478	NA
Burlington	318	2,145	275	471	NA	308	1,448	193	413	NA
Camden	126	1,210	238	249	NA	233	754	167	228	NA
Cape May	102	799	58	509	NA	109	637	40	468	NA
Cumberland	266	721	73	407	NA	280	495	52	374	NA
Essex	203	646	389	444	NA	185	411	291	393	NA
Gloucester	531	1,169	161	242	NA	426	754	112	222	NA
Hudson	1,705	431	179	375	NA	1,077	269	134	345	NA
Hunterdon	50	1,115	148	113	NA	50	644	111	103	NA
Mercer	221	967	201	224	NA	188	530	141	203	NA
Middlesex	537	1,162	486	376	NA	483	467	347	346	NA
Monmouth	48	1,575	352	545	NA	55	981	244	501	NA
Morris	46	1,813	305	309	NA	39	1,284	209	280	NA
Ocean	39	2,377	229	446	NA	38	1,734	160	409	NA
Passaic	18	835	195	194	NA	19	543	141	178	NA
Salem	435	590	77	132	NA	371	377	57	122	NA
Somerset	76	984	211	164	NA	55	441	152	149	NA
Sussex	6	1,667	77	99	NA	5	1,301	54	89	NA
Union	434	512	261	362	NA	540	272	185	333	NA
Warren	240	1,195	123	71	NA	240	809	92	64	NA
Total in State	5,555	24,760	4,718	6,505	NA	4,868	16,230	3,361	5,922	NA

NOTES:

(1) These totals include adjusted emissions from fugitive dust categories. See Attachment 2 of this report for further discussion.

Table XIX (cont.) – 2002 Statewide Emission Inventory by County and Source Sector

County	SO_2 Tons per Year					NH_3 Tons per Year				
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic
Atlantic	10	498	202	176	NA	0	184	297	13	329
Bergen	82	819	634	620	NA	0	543	821	163	863
Burlington	286	459	361	2,462	NA	0	522	454	39	520
Camden	162	506	313	1,057	NA	0	281	393	46	518
Cape May	12,178	163	75	993	NA	5	86	107	6	130
Cumberland	665	412	89	2,115	NA	1	310	118	20	203
Essex	2,110	1,078	429	980	NA	0	598	492	82	762
Gloucester	5,431	390	211	1,243	NA	0	445	265	22	274
Hudson	19,250	625	196	1,582	NA	14	461	222	56	572
Hunterdon	18	391	163	123	NA	0	569	187	14	164
Mercer	14,379	450	264	501	NA	3	310	331	41	347
Middlesex	504	689	590	612	NA	11	492	765	108	746
Monmouth	55	510	453	929	NA	0	399	628	47	651
Morris	52	798	403	276	NA	0	273	572	75	544
Ocean	38	652	290	216	NA	0	258	396	21	616
Passaic	26	494	231	223	NA	0	264	292	65	505
Salem	4,590	156	85	673	NA	1	463	97	7	89
Somerset	41	273	250	180	NA	0	423	317	43	309
Sussex	0	566	98	69	NA	0	296	135	8	235
Union	1,253	602	321	1,680	NA	3	456	425	82	501
Warren	101	345	134	63	NA	0	371	152	12	153
Total in State	61,231	10,876	5,793	16,772	NA	38	8,005	7,469	970	9,032

4. Emissions Comparison Summary

A comparison of the 1996 man-made emission inventory to the 2002 man-made emission inventory for New Jersey is presented in Table XX, by pollutant and source sector. The 1996 inventory was chosen for comparison, because the 1999 area source inventory and portions of the 1999 nonroad inventory were projections of the 1996 base year inventory, therefore are also a reflection of the growth factors chosen, in addition to the methodologies used to calculated emissions. This comparison shows the following:

- Total man-made VOC, summer tons per day: Overall slight decrease, decreases in point and onroad, increases in area and nonroad;
- Total man-made NOx summer tons per day: Overall slight increase, slight decreases in point, area and nonroad, increase in onroad; and,
- Total man-made CO summer tons per day: Overall increase, increases in point, area, nonroad and onroad.

More detailed discussions of increases and decreases in emissions are included in the individual sector comparisons in Appendix D. Decreases are due primarily to federal and state rules that control emissions from industries such as the NO_x Budget Program; revisions in federal engine standards; reformulated gasoline; and basic inspection and maintenance programs. Increases are due primarily to population growth and increases in vehicle miles traveled; changes in calculation and model methodologies and inputs; and the addition of new emission sources not previously included in the inventory.

Table XX
1996 and 2002 Statewide Emission Inventory by Source Sector and Pollutant

	VOC		NO_x		CO	
Source Sector	**1996 Tons per Summer Day**	**2002 Tons per Summer Day**	**1996 Tons per Summer Day**	**2002 Tons per Summer Day**	**1996 Tons per Summer Day**	**2002 Tons per Summer Day**
Point	173.22	113.15	291.05	280.36	78.45	91.33
Area	304.98	369.83	39.66	35.92	26.89	66.45
Onroad	309.01	274.74	453.82	558.66	2,182.99	2,856.37
Nonroad	203.73	220.60	269.24	231.56	2,152.25	2,497.80
Total in State	990.94	978.32	1,053.77	1106.50	4,440.58	5,511.95

V. Public Participation

A public hearing on this SIP revision was held on Friday, March 31, 2006 at 10:00 a.m. at the New Jersey Department of Environmental Protection Building, Public Hearing Room, 401 East State Street, Trenton, New Jersey. This hearing was held in accordance with the provisions of Section 110(a)(2) of the Clean Air Act, 42 U.S.C. §7410; 40 C.F.R. . 51.102(a)(1), the Air Pollution Control Act (1954), N.J.S.A. 26:2C-1 et seq., and the Administrative Procedure Act, N.J.S.A. 52:14 B-1 et seq. Written comments relevant to the proposal were accepted until the close of business, Friday, April 7, 2006. Notice of the hearing appeared in the March 20, 2006 edition of the New Jersey Register. In addition, timely notice of the hearing was published in six newspapers circulated in New Jersey at least 30 days prior to the hearing. Notices of the hearing and of the availability of the SIP revision was also mailed to several hundred interested parties.

Comments were submitted by two interested parties. A complete description of the public hearing process, the comments received and New Jersey's response to those comments is included in Appendix E.

Appendix A

History of New Jersey's Carbon Monoxide State Implementation Plan

This appendix provides a history of the previous updates to New Jersey's carbon monoxide SIP.

1982 Carbon Monoxide SIP

The 1982 Carbon Monoxide SIP identified two State measures and one federal measure to bring New Jersey's nonattainment areas into compliance with the NAAQS. The state measures identified were the pre-1990 modifications to the State's basic motor vehicle inspection and maintenance (I/M) program (not to be confused with the enhanced I/M program described in the 1990 Clean Air Act) and local transportation control measures. The federal measure was the Federal Motor Vehicle Control Program.

The USEPA approved the pre-1990 modifications to the basic I/M program for inclusion in the SIP.[65] The USEPA also found that New Jersey had implemented all of the transportation control measures committed to in the 1982 SIP revision.[66] The Federal Motor Vehicle Control Program was implemented nationally and was subsequently revised by the Clean Air Act Amendments of 1990, which contained new programs to further reduce emissions from motor vehicles. These programs continue to produce emission reductions as newer motor vehicles constantly replace older vehicles, a phenomenon commonly referred to as vehicle fleet turnover.

1992 Carbon Monoxide SIP Revisions

On November 15, 1992, New Jersey submitted to the USEPA revisions to the carbon monoxide SIP required by the 1990 Clean Air Act. These revisions included:

- Submission of a 1990 emission inventory;
- Commitment to perform periodic emission inventories;
- Commitment to demonstrate attainment of the carbon monoxide NAAQS using modeling;
- Commitment to submit annual vehicle miles traveled tracking reports;
- Requirement for the sale of oxygenated gasoline;
- Adoption of contingency measures for failure to attain the standard;
- Adoption of contingency measures for exceedance of the vehicle miles traveled forecast;
- Commitment to adopt an enhanced I/M program;
- Adoption of a new source review program; and,
- Commitment to perform conformity determinations.

The USEPA approved New Jersey's emission inventory and contingency measures on December 7, 1995, at 60 FR 62741. The State has since complied with all of the commitments made in its

[65] 40 CFR 52.1570 et seq.

[66] USEPA, Letter from USEPA Region II to Anthony McMahon, dated August 29, 1989.

1992 carbon monoxide SIP and has implemented the necessary measures. Many of the commitments included in the 1992 carbon monoxide SIP have been approved by the USEPA, as outlined in the next few paragraphs.

The USEPA adopted a limited approval of New Jersey's oxygenated fuels rule on February 12, 1996, at 61 FR 5299. It should be noted that the 1992 SIP revision contained a wintertime oxygenated fuels rule that outlined a program designed for both the Camden County (southern) carbon monoxide nonattainment area and the New Jersey portion of the New York City/Northern New Jersey/Long Island (northeastern) carbon monoxide nonattainment area. However, at the time of the USEPA's approval of the State's wintertime oxygenated fuels program, New Jersey was in attainment in the Camden County area and the USEPA's direct final rule redesignating that area to attainment was in effect.[67] Consequently, the USEPA's SIP approval for New Jersey's wintertime oxygenated fuels program applied only to the northeastern carbon monoxide nonattainment area. New Jersey tried several times to end the program due to concern regarding methyl tertiary-butyl ether (or MTBE), and subsequently adopted regulations that ended the wintertime oxygenated fuels program in the southern portion of the State.[68] At New Jersey's request, the USEPA approved the removal of New Jersey's oxygenated gasoline program from its SIP on November 22, 1999.

The USEPA proposed both a limited approval and a limited disapproval of the State's carbon monoxide New Source Review rule and a disapproval of the State's carbon monoxide attainment demonstration for the northeastern part of the State on November 10, 1994, at 59 FR 56019. The USEPA's proposed disapproval of the State's carbon monoxide attainment demonstration was predicated on the fact that the demonstration relied on the implementation of an enhanced I/M program that had not been fully developed or implemented by the State. On July 25, 1996, at 61 FR 38591, the USEPA adopted its limited approval of the State's New Source Review regulation, as well as adopting its proposed approvals of New Jersey's vehicle miles traveled forecast and its multi-state coordination commitment. As part of its July 25, 1996, promulgation, the USEPA committed to taking future action on New Jersey's attainment demonstration and enhanced I/M program in separate Federal Registers. The USEPA has granted conditional interim approval of New Jersey's enhanced I/M program and has proposed a full approval.[69,70] The USEPA determined on November 22, 1999, that the entire northeastern nonattainment area had met the NAAQS for carbon monoxide.[71]

1994 Carbon Monoxide SIP Revisions

On November 17, 1994, New Jersey revised its carbon monoxide SIP for the northeastern carbon monoxide nonattainment area to incorporate the results for the most recent planning tools available to the NJDEP. The updated planning tools included:

1) The USEPA Mobile Source Emission Factor Model, MOBILE5a;

[67] 61 Fed. Reg. 33678 (June 28, 1996) and 60 Fed. Reg. 62741 (December 7, 1997).
[68] 27 NJ Reg.,. 4731 (November 20, 1995) and 28 NJ Reg. 851 (February 5, 1996).
[69] 62 Fed. Reg. 26401 (May 14, 1997).
[70] 66 Fed. Reg. 47130.
[71] 64 Fed. Reg. 48970.

2) The latest version of the line-source dispersion model, CAL3QHC version 2.0; and,
3) The travel demand model for the northern part of the State.

These latest planning tools were used for the 1994 carbon monoxide SIP revision, in part, to ensure that the methodologies and assumptions used to calculate emission reductions for SIP purposes were consistent with those used to calculate emission reductions for Transportation Improvement Program conformity purposes.

The combined application of these updated tools resulted in an increase in the emission inventory, increased benefits for the control programs, a lower vehicle miles traveled growth rate, and a higher predicted concentration at each intersection examined in the attainment demonstration. The 1994 attainment demonstration also included the effects of the State's wintertime oxygenated fuel and enhanced I/M programs. However, the conclusion remained the same as in the 1992 SIP revision; that is, the carbon monoxide NAAQS would be attained by December 31, 1995.

1995 Carbon Monoxide SIP Revision

In 1995, the State of New Jersey applied to the USEPA for redesignation of both the Camden County carbon monoxide nonattainment area and the nine not-classified carbon monoxide areas to attainment of the carbon monoxide NAAQS. The USEPA approved these redesignation requests in a Federal Register notice published on December 7, 1995, that became effective on February 7, 1996.[72] This approval was re-affirmed by the USEPA in a Federal Register notice published on June 28, 1996 that incorporated the USEPA's responses to comments received during the public comment period.[73]

1996 Request for an Extension of the Attainment Date

It was not possible to demonstrate two years of non-violating air quality data by the December 31, 1995 attainment deadline due to carbon monoxide NAAQS violations in 1994. Therefore, the State had the choice of either allowing the area to be reclassified to the higher classification of serious carbon monoxide nonattainment or applying to the USEPA for an extension of the attainment date as allowed by the Clean Air Act.[74] On April 24, 1996, the State submitted a request to the USEPA for a 1-year extension of the attainment date to December 31, 1996.[75] New York and Connecticut, the two other states that comprise the New York City/Northern New Jersey/Long Island carbon monoxide nonattainment area, subsequently submitted letters to the USEPA on July 31, 1996, and June 27, 1996, respectively, concurring with New Jersey's request for an attainment date extension. The northeastern carbon monoxide nonattainment area met the Clean Air Act's requirements and the USEPA's criteria for obtaining an extension of an attainment date for a moderate nonattainment area in that it:

[72] 60 Fed. Reg. 62741.
[73] 61 Fed. Reg. 33678.
[74] 42 U.S.C. 7512(a)(4).
[75] NJDEP, Letter from Robert C. Shinn, Commissioner to Jeanne M. Fox, Regional Administrator, USEPA, Region II, dated April 24, 1996.

1) Had complied with all the requirements and commitments pertaining to the area in the applicable implementation plan; and,
2) Had no more than one exceedance of the carbon monoxide NAAQS at any monitoring site in the year preceding the extension year, that is, 1995.[76,77]

The USEPA approved New Jersey's and the other states' 1-year attainment date extension requests on November 5, 1996, at 61 FR 56897.

1998 Carbon Monoxide SIP Revision

On July 21, 1997, the State proposed regulatory amendments to repeal its wintertime oxygenated fuel requirements for Northern New Jersey in the New Jersey Register (29 NJR 3222(a)). In addition to this proposed rulemaking, the NJDEP also prepared a proposed carbon monoxide SIP revision that, in part:

1) Demonstrated that the New Jersey portion of the New York City/Northern New Jersey/Long Island carbon monoxide nonattainment area had attained the carbon monoxide NAAQS;
2) Requested that, based on this attainment demonstration and a comprehensive plan to maintain the standard for at least the next ten years, the New Jersey portion of the multi-state nonattainment area be redesignated to attainment; and,
3) Removed the State's wintertime oxygenated fuel program from New Jersey's carbon monoxide SIP.

A hearing to take public comment on both the rulemaking proposal and the SIP revision was held on August 11, 1997, and written comments were accepted until close of business, August 20, 1997. Based upon comments received during the comment period and subsequent conversations with the USEPA and the other states in the multi-state nonattainment area, the State decided, on August 7, 1998, to submit only portions of the proposed carbon monoxide SIP revision to the USEPA. The State subsequently submitted the entire proposal except for:

1) The maintenance plan (which demonstrated that New Jersey would continue to maintain the carbon monoxide NAAQS until the year 2009 and discussed the contingency measure(s) that would be implemented should New Jersey again violate the NAAQS); and,
2) The request that the USEPA redesignate the northeastern nonattainment area to attainment (the "redesignation request").

[76] USEPA memorandum dated October 23, 1995, entitled Criteria for Granting Attainment Date Extensions, Making Attainment Determinations, and Determinations of Failure to Attain the NAAQS for Moderate Carbon Monoxide Nonattainment Areas, from Sally L. Shaver, Director, Air Quality Strategies and Standards Division, to Regional Air Office Directors.
[77] 42 U.S.C. 7512(a).

In that submittal, the State also committed to revise its transportation conformity emission budget once the USEPA took action on the SIP revision.

On August 17, 1998, the NJDEP adopted its regulatory proposal calling for the removal of the wintertime oxygenated fuel program in Northern New Jersey.[78] On November 22, 1999, the USEPA determined that the New York City/Northern New Jersey/Long Island carbon monoxide area had attained the carbon monoxide NAAQS.[79] The USEPA also approved the State's request to remove New Jersey's oxygenated gasoline program from its SIP.[80]

2002 Redesignation Request and Maintenance Plan for the New Jersey Portion of the New York City/Northern New Jersey/Long Island Carbon Monoxide Nonattainment Area

In 2002, New Jersey submitted a request to the USEPA to redesignate the northern carbon monoxide nonattainment area to attainment.[81] This SIP revision contained:

1) Updated air quality monitoring data that demonstrated that measured carbon monoxide levels continued to remain below standards;
2) A maintenance plan that included control measures, transportation conformity emission budgets, and a contingency plan; and,
3) Other information that supported the Request for Redesignation.

The air quality monitoring data showed attainment with the health-based carbon monoxide NAAQS since 1996, while the carbon monoxide inventory projections for the years 2007 and 2014 that were included in the maintenance plan showed reductions in emissions relative to the emissions estimated for 1996.

The USEPA approved New Jersey's redesignation request and maintenance plan on August 23, 2002 at 67 FR 54574. Included in the approval were transportation conformity emission budgets for 1997, 2007, and 2014.

2004 New Jersey Revised Motor Vehicle Transportation Conformity Emission Budgets Using the MOBILE6 Model

In 2004, New Jersey submitted a request to the USEPA for a SIP revision to establish updated transportation conformity emission budgets that incorporated new data and the use of the new USEPA motor vehicle emissions model, MOBILE6, that was required for use in future conformity determinations for New Jersey. Transportation conformity emission budgets for carbon monoxide, VOCs, and NO_x were updated to reflect the most recent version of the USEPA's emission factor prediction model and the latest vehicle registration data. The latest vehicle registration data were used to establish new estimates of the age distribution of New Jersey's onroad motor vehicle fleet. This SIP revision did not affect any of the planned or

[78] 30 NJ Reg., 3025.
[79] 64 Fed. Reg., 48970.
[80] 64 Fed. Reg. 63690.
[81] NJDEP, SIP Revision for the Attainment and Maintenance of the Carbon Monoxide NAAQS, Redesignation Request and Maintenance Plan for the New Jersey Portion of the New York/Northern New Jersey/Long Island Carbon Monoxide Nonattainment Area, January 15, 2002.

implemented control measures for carbon monoxide, VOCs, and NO_x. In addition, the updated budgets did not indicate a need for any additional control measures for New Jersey to maintain attainment of the carbon monoxide NAAQS or reach attainment of the 1-hour ozone NAAQS.

The USEPA approved New Jersey's SIP revision request on August 30, 2004 at 69 FR 52834-52836.

Appendix B

History of New Jersey's Ozone State Implementation Plan

This appendix provides a brief history of the previous revisions to New Jersey's ozone SIP.

Attainment Demonstration SIP History

On August 31, 1998, New Jersey submitted to the USEPA a SIP revision containing a demonstration of attainment of the 1-hour ozone NAAQS for the New York City/Northern New Jersey/Long Island and Philadelphia/Wilmington/Trenton nonattainment areas.[82] This original attainment demonstration submittal is hereafter referred to as the State's Phase II Ozone SIP. The Phase II Ozone SIP submittal provided for an attainment demonstration as required by 42 U.S.C. §7511a(c)(2)(A), §182(c)(2)(A) of the Clean Air Act and addressed the USEPA's subsequent requirements regarding attainment demonstration for the 1-hour NAAQS for ozone.[83,84]

New Jersey used a "weight of evidence" to determine the emission reductions needed to attain the ozone standard. A weight of evidence analysis combines results from advanced photochemical grid models and the most recent air quality data to improve the estimate of emission reductions needed to attain. The method used by New Jersey predicts future ozone concentrations from a baseline of actual historic air quality data and the ozone improvement predicted by the photochemical grid model. The improvement is the model-predicted base year concentration divided by the model-predicted future attainment year concentration. This method takes advantage of the fact that air quality models may be more accurate at calculating relative improvement in air quality as opposed to predicting an absolute concentration at a particular geographic site.[85]

In addition to including a demonstration of attainment of the 1-hour NAAQS for ozone for the New York City/Northern New Jersey/Long Island and Philadelphia/Wilmington/Trenton nonattainment areas and a list of the control measures adopted by the State to date, the Phase II Ozone SIP committed the State to:

1) Submit post-1999 Rate of Progress Plans and any adopted regulations needed to achieve the post-1999 emission reductions by December 31, 2000;
2) Implement the New Jersey portion of the USEPA regional NO_x cap (NO_x SIP Call);
3) Undertake a midcourse review and submit a report to the USEPA by December 31, 2002;

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[82] NJ SIP Revision, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Phase II Ozone Submittal, August 31, 1998.
[83] USEPA, Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation to the Regional Administrators, Region I-X. This Policy is commonly referred as "The March 2nd Policy," March 2, 1995.
[84] USEPA, Memorandum from Richard D. Wilson, Acting Assistant Administrator for the Office of Air and Radiation to the Regional Administrators, Regions I-X, "Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM_{10} NAAQS," December 29, 1997.
[85] USEPA, Guidance for Improving Weight of Evidence Through Identification of Additional Emission Reductions Not Modeled, November, 1999.

4) Evaluate additional control measures which are not currently implemented for potential future implementation; and,
5) Propose such reasonable and necessary control measures needed to address any shortfall identified in the midcourse review which are necessary for attainment.

In reviewing the attainment demonstrations submitted by New Jersey, as well as other states' submittals (such as New York, Pennsylvania and Maryland), the USEPA performed its own analyses (also using the weight of evidence method but with a different base year and different modeling results) and determined that further emission reductions were necessary to insure attainment by the applicable dates. For New Jersey, the USEPA's analyses results were reasonably similar to the uncertainty analysis results New Jersey presented in its Phase II Ozone SIP to quantify the uncertainties incorporated its air quality projections. Therefore, considering both the USEPA and the prior state analyses, the State revised its attainment demonstration to include a commitment to a process designed to secure New Jersey's fair share of the additional emission reductions identified by the USEPA.

On September 12, 2001, New Jersey submitted a SIP revision containing an update to meeting the requirements of the alternative ozone attainment demonstration policy (Control Measures SIP).[86] Specifically, this SIP revision provided:

1) An enforceable commitment by New Jersey to adopt sufficient measures to address its fair share of the level of additional emission reductions identified by the USEPA, and to revise its Attainment Demonstration accordingly to reflect those measures; [87]
2) A revised transportation conformity emission budget that included the Tier 2 Motor Vehicle Standard/Low Sulfur Gasoline Program benefits;
3) An enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity emission budgets to reflect any additional measures adopted (beyond the Tier 2 Motor Vehicle Standard/Low Sulfur Program) pertaining to motor vehicles;
4) An enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity emission budgets, within one year after the MOBILE6 model is released and required for use in the development of SIPs;
5) A list of possible additional control measures from which a suite of measures can be drawn that would be expected to meet New Jersey's fair share of the USEPA – identified emission reduction shortfall; and,
6) An enforceable commitment to perform a midcourse review by December of 2003 that was subsequently changed to December of 2004.

The control measure SIP included the following additional rules that implemented control measures: NO_x rule, consumer products rule, portable fuel containers rule, architectural and

[86] New Jersey Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the One-Hour Ozone National Ambient Air Quality Standard, Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Additional Emission Reduction Commitment and Transportation Conformity Budgets, April 26, 2000.
[87] 64 Fed. Reg. 70380, (December 16, 1999).

industrial maintenance coatings rule, mobile equipment refinishing rule, and solvent cleaning operations rule. The projected emission benefits from these rules just covered the USEPA identified shortfall for the Philadelphia/Wilmington/Trenton nonattainment area and more than covered the USEPA identified shortfall for the New York City/Northern New Jersey/Long Island nonattainment area.

Rate of Progress SIP History

The State submitted its original 1996 15-percent Rate of Progress plans to the USEPA on November 15, 1993.[88] Subsequently, on December 31, 1996, New Jersey submitted to the USEPA, as part of its Phase I Ozone SIP submittal, a revision which updated its 1993 15-percent Rate of Progress plans and included its 1999 24-percent Rate of Progress plans to the USEPA.[89] The USEPA granted conditional interim approval to New Jersey's Phase I Ozone SIP submittal on June 30, 1997.[90] The USEPA's approval of New Jersey's Phase I Ozone SIP was conditional based on the modeling contained in the 15-percent and 24-percent Rate of Progress Plans.[91] On December 12, 1997, the USEPA disapproved the 15-percent Rate of Progress Plans' portion of New Jersey's Phase I Ozone SIP due to the realization that the benefits claimed in these plans for the State's enhanced I/M program would not be obtained.[92]

On February 5, 1999, the State submitted revised 15-percent Rate of Progress and 24-percent Rate of Progress plans that no longer relied on the benefits anticipated from the enhanced I/M program. These revised plans were approved by the USEPA on April 23, 1999.[93] On December 13, 1999, the State began implementation of its enhanced I/M program.

On March 31, 2001, New Jersey submitted a SIP revision containing the actual 1996 inventory and Rate of Progress plans for 2002, 2005 and 2007.[94] The Rate of Progress SIP contained the remaining Rate of Progress plans for each milestone year up to and including the attainment years for each applicable nonattainment area. Using control measures consistent with those in the State's demonstration of attainment of the 1-hour ozone standard, it was shown that the Rate of Progress targets were achieved. In addition, the State agreed to find further emission

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[88] New Jersey Department of Environmental Protection and Energy, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Federal Clean Air Act Requirements, November 15, 1993.

[89] The State of New Jersey, Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy, Phase I Ozone SIP submittal, December 31, 1996.

[90] 62 Fed. Reg. 35100 (June 30, 1997).

[91] In a letter dated May 29, 1997, New Jersey committed to perform the modeling necessary to estimate the emissions reductions that would result from the enhanced I/M program, as implemented, within 12 months from the effective date of the USEPA's approval action (that is, by July 30, 1998).

[92] Letter dated December 12, 1997 to New Jersey Governor Christine Todd Whitman from Regional Administrator Muszynski, and a similar but more detailed letter dated December 12, 1997 to Commissioner Robert C. Shinn, Jr., NJDEP and Commissioner John J. Haley, Jr., New Jersey Department of Transportation, from Deputy Regional Administrator William J. Muszynski, P.E., USEPA, Region II. This action was later formalized by the USEPA at 63 Fed. Reg. 45399 (August 26, 1998).

[93] 64 Fed. Reg. 19913 (April 23, 1999).

[94] NJDEP, State Implementation Plan revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard, New Jersey 1996 Actual Emission Inventory and Rate of Progress (ROP) Plans for 2002, 2005 and 2007, March 31, 2001.

reductions, identified by the USEPA, and is currently working with other Ozone Transport Region states in this regard. Once these measures are adopted, projected controlled emission levels would decrease further. The Rate of Progress SIP also contained revised transportation conformity emission budgets.

The purpose of the Rate of Progress submittals was to demonstrate steady incremental progress (three percent of the 1990 VOC baseline emission level averaged over each consecutive three year period beginning in 1991) leading towards the ultimate goal of attainment. The purpose of the attainment demonstration, however, was to assess the overall emission reductions necessary to actually achieve attainment, which could be greater than or less than the Rate of Progress incremental reductions. If the attainment demonstration shows that a state needs less than three percent over each consecutive three year period to reach attainment, it can petition the USEPA to reduce the Rate of Progress requirement for their particular state.[95] In New Jersey's case, however, attaining the standard requires emission reductions that exceed Rate of Progress requirements. By way of illustration, the control measures in the attainment demonstration were incorporated in the Rate of Progress SIP, and the resulting controlled emission levels indicate that the inventories for New Jersey portion of the New York City/Northern New Jersey/ Long Island and Philadelphia/Wilmington/Trenton nonattainment areas are well below the targets derived from the three percent reduction over each consecutive three year period. For example, for the New York City/Northern New Jersey/Long Island nonattainment area for 2007, the sum of the New Jersey VOC and NO_x percentage emission reduction was 83.5 percent as compared to a 48 percent Rate of Progress test requirement. Therefore, for New Jersey, the emission reductions needed to attain the ozone standard significantly exceed the three percent per year Rate of Progress requirements.

2003 New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Emission Budgets Using the MOBILE6 Model

In 2003, New Jersey submitted a SIP revision to fulfill its commitment to revise 2005 and 2007 onroad motor vehicle emission budgets for the Philadelphia/Wilmington/Trenton nonattainment area and New York City/Northern New Jersey/Long Island nonattainment area using the new MOBILE6 model.[96] In addition, this SIP revision showed that the new levels of onroad motor vehicle emissions calculated using MOBILE6 continue to support predicted achievement of rate of progress requirements and projected attainment of the 1-hour ozone NAAQS by the attainment dates for each nonattainment area. The MOBILE6 generated inventories were also used to establish transportation conformity emission budgets for the appropriate Metropolitan Planning Organizations (MPOs) in New Jersey.

The USEPA approved the revised emission inventories and transportation conformity emission budgets using MOBILE6 on May 5, 2003 at 68 FR 23662.

[95] 42 U.S.C. §7511a(c)(2)(B)(ii).
[96] NJDEP, SIP Revision for the Attainment and Maintenance of the Ozone NAAQS, New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using the MOBILE6 Model, April 4, 2003.

2004 New Jersey Revised Motor Vehicle Transportation Conformity Emission Budgets Using the MOBILE6 Model

In 2004, New Jersey submitted a request to the USEPA for a SIP revision to establish updated transportation conformity emission budgets that incorporated new data and the use of the new USEPA motor vehicle emissions model (MOBILE6) that was required for use in future conformity determinations for New Jersey. Transportation conformity emission budgets for carbon monoxide, VOCs, and NO_x were updated to reflect the most recent version of the USEPA's emission factor prediction model and the latest vehicle registration data. The latest vehicle registration data were used to establish new estimates of the age distribution of New Jersey's onroad motor vehicle fleet. This SIP revision did not affect any of the planned or implemented control measures for carbon monoxide, VOCs, and NO_x. In addition, the updated budgets did not indicate a need for any additional control measures for New Jersey to maintain attainment of the carbon monoxide NAAQS or reach attainment of the 1-hour ozone NAAQS.

The USEPA approved New Jersey's SIP revision request on August 30, 2004 at 69 FR 52834-52836.

The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions for the Attainment and Maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, 1-Hour Ozone National Ambient Air Quality Standard, and Fine Particulate Matter National Ambient Air Quality Standard; and the 2002 Periodic Emission Inventory

Appendix E: Public Participation

May 2006

DOCUMENTATION OF COMPLIANCE WITH PUBLIC NOTICE REQUIREMENTS

On or about February 28, 2006, the Department took the following actions to provide timely notice of proposed SIP revision:

1. The notice in the New Jersey Register on March 20, 2006, at 38 N.J.R. 1473(b);
2. Published legal advertisements providing notice of the proposed SIP revision, the date and location of the public hearing, specification of the public comment period, and the address for submission of written comments in six newspapers of general circulation (copies of the legal advertisement and affidavits of its publication are enclosed);
3. Mailed copies of the proposal to 14 public libraries throughout the State, as well as to the Department's four regional offices and its public access center;
4. Mailed notice of the public hearing to the following states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and the District of Columbia;
5. Mailed notice of the public hearing to the following organizations: Ozone Transport Commission (OTC), Mid-Atlantic Regional Air Management Association (MARAMA), and Northeast States for Coordinated Air Use Management (NESCAUM);
6. Sent a copy of the proposal to EPA Region 2;
7. Mailed a Notice of Availability of the Proposal to approximately 60 interested parties, posted a copy of the proposal on the Department's website; and
8. Electronically mailed a Notice of Availability of the Proposal to approximately 300 interested parties;

A public hearing on this SIP revision was held on Friday, March 31, 2006 at 10:00 a.m. at the New Jersey Department of Environmental Protection Building, Public Hearing Room, 401 East State Street, Trenton, New Jersey. This hearing was held in accordance with the provisions of Section 110(a)(2) of the Clean Air Act, 42 U.S.C. §7410; 40 C.F.R. 51.102(a)(1); the Air Pollution Control Act (1954), N.J.S.A. 26:2C-1 et seq., and the Administrative Procedure Act, N.J.S.A. 52:14 B-1 et seq. Written comments relevant to the proposal were accepted until the close of business, Friday, April 7, 2006. Notice of the hearing appeared in the March 20, 2006 edition of the New Jersey Register. In addition, timely notice of the hearing was published in six newspapers circulated in New Jersey at least 30 days prior to the hearing. Notices of the hearing and of the availability of the SIP revision was also mailed to several hundred interested parties.

Attachment A contains the notice announcing the availability of the proposed SIP revision and the hearing.

Attachment B contains the documentation of the notices that appeared in the newspapers and the New Jersey Register.

Attachment C contains the response to comment document.

The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions for the Attainment and Maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, 1-Hour Ozone National Ambient Air Quality Standard, and Fine Particulate Matter National Ambient Air Quality Standard; and the 2002 Periodic Emission Inventory

Appendix E: Public Participation

Attachment A: Notice of Availability

May 2006

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY MANAGEMENT ELEMENT

NOTICE OF PUBLIC HEARING AND AVAILABILITY:

Proposed Revisions to the New Jersey State Implementation Plan covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory

State of New Jersey is proposing revisions to the State Implementation Plans (SIP) that cover the attainment and maintenance of the 8-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the 1-hour ozone NAAQS and is proposing a fine particulate matter ($PM_{2.5}$) NAAQS SIP for transportation conformity purposes. In addition, the 2002 Periodic Emission Inventory is being included for public review and comment.

A public hearing is scheduled on the proposal on March 31, 2006, at 10:00 a.m. at the New Jersey Department of Environmental Protection, 401 E. State Street, Trenton, New Jersey 08625. This hearing is being held in accordance with the provisions of 42 U.S.C. §7410. Written comments relevant to the proposal may be submitted until the close of business April 7, 2006 to Willa Williams, Bureau of Air Quality Planning, New Jersey Department of Environmental Protection, P.O. Box 418, Trenton, New Jersey 08625-0418. Fax number: (609) 633-6198. Copies sent by fax should be followed with a copy sent by mail.

This SIP revision includes updated carbon monoxide and 1-hour ozone budgets for northern New Jersey for transportation conformity purposes. Changes to these budgets are proposed because certain key planning assumptions have been updated. In addition, the general conformity emission budget for McGuire Air Force Base is proposed to be modified to ensure that increases in activity at the McGuire Air Force Base conform with the ozone SIP.

New Jersey is proposing fine particulate matter transportation conformity budgets for northern New Jersey to be used by the Metropolitan Planning Organizations during the interim period prior to the establishment of $PM_{2.5}$ budgets with the $PM_{2.5}$ attainment demonstration SIP due in April 2008.

The proposed carbon monoxide limited maintenance plan for Camden County and the nine not classified areas provides the second ten-year plan for compliance with the 8-hour carbon monoxide standard.

The proposed 2002 periodic emission inventory provides the basis for reducing emissions in the State and in the region. New Jersey intends to submit an 8-hour ozone attainment demonstration SIP to the USEPA in June 2007, a Regional Haze SIP to the USEPA in December 2007, and a $PM_{2.5}$ attainment demonstration in April 2008.

The State of New Jersey is seeking comment from the public on all aspects of this proposed SIP revision. Written and/or oral testimony concerning the proposed SIP revision will be received at a public hearing held on:

March 31, 2006 at 10:00 a.m.
New Jersey Department of Environmental Protection
401 E. State Street
Trenton, New Jersey 08625

Written comments relevant to the proposed SIP revision may be submitted until the close of business April 7, 2006, and should be directed to:

Willa Williams
Bureau of Air Quality Planning
New Jersey Department of Environmental Protection
PO Box 418
Trenton, New Jersey 08625-0418

The following are options for obtaining a copy of the proposed SIP revisions:

1. Visit the NJDEP's website at: http://www.state.nj.us/dep/baqp, where SIP revisions are available. The proposed SIP revision and associated files are located at this website.

2. Inspect the proposals during normal office hours at any of these locations:

NJ Department of Environmental Protection
Public Information Center, 1st Floor
401 E. State Street
Trenton, New Jersey 08625

NJDEP Bureau of Enforcement
Central Region
300 Horizon Center, P.O. Box 407
Robbinsville, New Jersey 08625-0407

NJDEP Bureau of Enforcement
Southern Region
One Port Center
2 Riverside Drive, Suite 201
Camden, New Jersey 08102

Trenton Public Library
120 Academy Street
Trenton, New Jersey 08608

Penns Grove / Carney's Point
Public Library Association
222 South Broad Street
Penns Grove, New Jersey 08608

New Brunswick Free Public Library
60 Livingston Avenue
New Brunswick, New Jersey 08901

Library of Science and Medicine
Rutgers University
P.O. Box 1029

Freehold Public Library
28 ½ East Main Street
Freehold, New Jersey 07728

Somerville Public Library
35 W. End Avenue
Somerville, New Jersey 08876
NJDEP Bureau of Enforcement
Northern Region
7 Ridgedale Avenue
Cedar Knolls, New Jersey

Atlantic City Public
1 North Tennessee Ave
Atlantic City, New Jersey 08401

Newark Public Library
5 Washington Street
P.O. Box 630
Newark, New Jersey 07102-0630

Burlington County Library
Morristown and Morris County
1 Miller Road
Morristown, New Jersey 08016

Joint Free Public Library
Morristown and Morris County
1 Miller Road
Morristown, New Jersey 07960

Burlington City Library
23 West Union Street
Burlington, New Jersey 08016

Perth Amboy Public Library
193 Jefferson Street
Perth Amboy, New Jersey 08861

Toms River Public Library
101 Washington Street
Toms River, New Jersey 08753-7625

Camden Free Public Library
418 Fredericks Street
Camden, New Jersey 08103

3. Request a copy of the NJDEP's proposal by calling Willa Williams at (609) 292-6722, by e-mailing her at Willa.Williams@dep.state.nj.us, or by mailing or faxing the attached form to her as indicated on the form.

IF YOU HAVE ANY QUESTIONS: For additional help in getting access to the NJDEP's proposals or for information about what they mean, call the NJDEP, Bureau of Air Quality Planning at (609) 292-6722.

MAIL OR FAX THIS SIP REVISION PROPOSAL REQUEST TO:

Willa Williams
Air Quality Planning
Office of Air Quality Management
PO Box 418
401 East State Street
Trenton, New Jersey 08625-0418
(609) 292-6722 Fax: (609) 633-6198
Willa.Williams@dep.state.nj.us

Please send me a copy of the Proposed Revisions to the New Jersey State Implementation Plan covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the annual Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory

Name: _____

Address: _____

City / State / Zip _____

The following appendices are computer files available at: http://www.state.nj.us/dep/baqp

Appendix C Transportation Conformity Emission Budget Back-up Files

Appendix D 2002 Periodic Emissions Inventory Document

The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions for the Attainment and Maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, 1-Hour Ozone National Ambient Air Quality Standard, and Fine Particulate Matter National Ambient Air Quality Standard; and the 2002 Periodic Emission Inventory

Appendix E: Public Participation

Attachment B: Documentation of the Notices that Appeared in the Newspapers and the New Jersey Register

May 2006

This attachment includes the documentation of the notices that appeared in the newspapers and the New Jersey Register. This documentation is only available in hardcopy format.

Affidavit of Publication

Publisher's Fee $102.24 **Affidavit Charge $25.00**

State of New Jersey } ss.

MONMOUTH/OCEAN COUNTIES

Personally appeared **JON IRAGGI**

of the **Asbury Park Press**, a newspaper printed in Freehold, NJ and published in NEPTUNE, in said County and State, and of general circulation in said county, who being duly sworn, deposeth and saith that the advertisement of which the annexed is a true copy, has been published in the said newspaper **1 (ONE)** times, once in each issue, as follows

2/28/06,

JEAN L. ESPOSITO
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES JAN. 27,2010

A.D., **2006**

Sworn and subscribed before me this
28th day of February, A.D., 2006

Notary Public of New Jersey

STATE OF NEW JERSEY

NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION ENVIRONMENTAL REGULATION AIR QUALITY MANAGEMENT

Notice of proposed revisions to New Jersey State Implementation Plans covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory.

Public Notice

Take notice that the New Jersey Department of Environmental Protection (Department) is proposing revisions to the State Implementation Plans (SIP) that cover the attainment and maintenance of the 8-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the 1-hour ozone NAAQS and is proposing a fine particulate matter ($PM_{2.5}$) NAAQS SIP for transportation conformity purposes. In addition, the 2002 Periodic Emission inventory is being included for public review and comment.

Specifically, this SIP revision includes updated carbon monoxide and 1-hour ozone budgets for northern New Jersey for transportation conformity purposes. In addition, the general conformity emission budget for McGuire Air Force Base is proposed to be modified to ensure that increases in activity at the McGuire Air Force Base conform with the ozone SIP. The Department is proposing a fine particulate matter transportation conformity budget for northern New Jersey to be used by the Metropolitan Planning Organizations during the interim period prior to the establishment of $PM_{2.5}$ budgets with the $PM_{2.5}$ attainment demonstration SIP due in April 2008. The proposed carbon monoxide limited maintenance plan for Camden County and the nine not classified areas provides the second ten-year plan for compliance with the 8-hour carbon monoxide standard. The proposed 2002 periodic emission inventory provides the basis for reducing emissions in the State and in the region. The Department intends to submit an 8-hour ozone attainment demonstration SIP to the USEPA in June 2007, a Regional Haze SIP to the USEPA in December 2007, and a $PM_{2.5}$ attainment demonstration in April 2008.

The Department is seeking comment from the public on these proposed SIP revisions. Written and/or oral testimony concerning the SIP revisions will be received at a public hearing held on:

March 31, 2006 at 10:00 a.m.
Public Hearing Room
Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625

This hearing is being held in accordance with the provisions of 42 U.S.C. §7410. Written comments may be submitted by April 7, 2006 to:

Willa Williams
Department of Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625

($102.24) **25232**

Asbury Park Press

State of New Jersey, }
Mercer County } ss.

JoAnn Bidlack

being duly sworn according to law, on his/her oath says that he/she is Bookkeeper for The Times Newspapers, a newspaper printed and circulated in the City of Trenton, in the County and State aforesaid, and the deponent further states he/she has personal knowledge that an advertisement, of which the annexed is a true copy, was published in the issue of

February 28 20 06

JoAnn Bidlack

Sworn and subscribed before me

this 28th day of Feb. 20 06

Notary Public for N.J.

MARTIN B. STEWART
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES JAN. 06, 2008

ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
AIR QUALITY MANAGEMENT

Notice of proposed revisions to New Jersey State Implementation Plans covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory.

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Trenton, New Jersey 08625

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Wille Williams
Department of
Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625

Fee $57.68 2/28 Times

Trenton Times

The Press
OF ATLANTIC CITY

CERTIFICATION
Proof of Publication

Marlene Servis of lawful age, acting in her capacity as an employee of South Jersey Publishing Company, Inc. d/b/a The Press of Atlantic City, a daily newspaper printed and published c/o 1000 West Washington Avenue, Pleasantville, New Jersey 08232, and distributed in the following counties: Atlantic, Camden, Cape May, Cumberland, Gloucester, and Ocean and mailed to various parts of the State of New Jersey, the United States, and foreign countries, does hereby certify that the Notice accompanying this Certification was published in The Press of Atlantic City on :

2/28/2006.

All interested parties may rely upon the representations contained herein limited solely to the authenticity of the Notice accompanying this Certification to be an accurate reproduction of the same and the date upon which it was published.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Dated: 2/28/2006

Marlene Servis

SOUTH JERSEY PUBLISHING COMPANY
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PENNSYLVANIA

NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
AIR QUALITY MANAGEMENT

Notice of proposed revisions to New Jersey State Implementation Plans covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory.

Public Notice

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The Department is seeking comment from the public on these proposed SIP revisions. Written and/or oral testimony concerning the SIP revisions will be received at a public hearing held on:

March 31, 2006 at
10:00 a.m.
Public Hearing Room
Department of
Environmental Protection
401 East State Street
Trenton, New Jersey 08625

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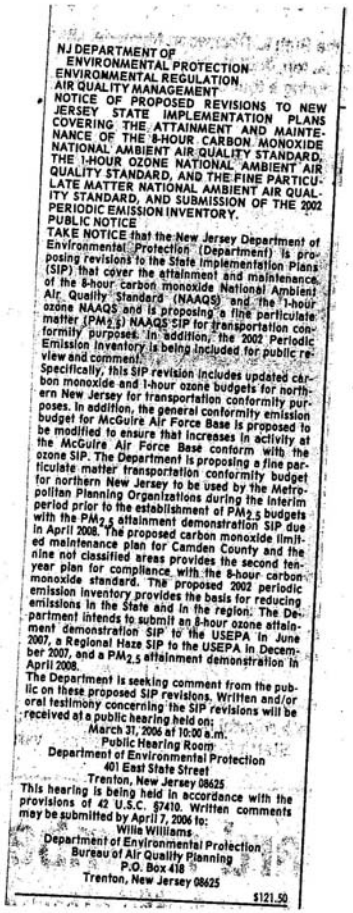
Willa Williams
Department of
Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625
Printer Fee: $46.44
#0090124803
Pub Date: February 28, 2006



NJ DEPARTMENT OF
ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
AIR QUALITY MANAGEMENT
NOTICE OF PROPOSED REVISIONS TO NEW JERSEY STATE IMPLEMENTATION PLANS COVERING THE ATTAINMENT AND MAINTENANCE OF THE 8-HOUR CARBON MONOXIDE NATIONAL AMBIENT AIR QUALITY STANDARD, THE 1-HOUR OZONE NATIONAL AMBIENT AIR QUALITY STANDARD, AND THE FINE PARTICULATE MATTER NATIONAL AMBIENT AIR QUALITY STANDARD, AND SUBMISSION OF THE 2002 PERIODIC EMISSION INVENTORY.
PUBLIC NOTICE
TAKE NOTICE that the New Jersey Department of Environmental Protection (Department) is proposing revisions to the State Implementation Plans (SIP) that cover the attainment and maintenance of the 8-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the 1-hour ozone NAAQS and is proposing a fine particulate matter ($PM_{2.5}$) NAAQS SIP for transportation conformity purposes. In addition, the 2002 Periodic Emission Inventory is being included for public review and comment.
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Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625
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Willa Williams
Department of Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625

$121.50

STATE OF NEW JERSEY }
COUNTY OF ESSEX } SS

Michael Dawson

Being duly sworn according to law, on h. oath sayeth that he is Clerk of the Star-Ledger, in said County of Essex, and that the notice, of which the attached is a copy, was published in said paper on the 28 day of Feb 2006 and continued therein for _____ successively, at least once in each _____ for _____

Michael Dawson

Sworn to and subscribed
before me this 1st
day of March, 2006

Donna M. Clement
NOTARY PUBLIC of NEW JERSEY

DONNA M. CLEMENT
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Mar. 5, 2008

Star Ledger

NJ DEPT OF ENVIRONMNTL PROTEC 1638404
401 E STATE ST
PO BOX 413
TRENTON NJ 08625-0413

RECEIVED
MAR 6 2006

NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
AIR QUALITY MANAGEMENT

Notice of proposed revisions to New Jersey State Implementation Plans covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory

Public Notice

Take notice that the New [illegible] proposing revisions to [illegible] tion Plans (SIP) that cover the attainment and maintenance of the 8-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the 1-hour ozone NAAQS and is proposing a fine particulate matter (PM2.5) NAAQS SIP for transportation conformity purposes. In addition, the 2002 Periodic Emission Inventory is being included for public review and comment.

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The Department is seeking comment from the public on these proposed SIP revisions. Written and/or oral testimony concerning the SIP revisions will be received at a public hearing held on:

March 31, 2006 at 10:00 AM
Public Hearing Room
Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625

This hearing is being held in accordance with the provisions of 42 U.S.C. §7410. Written comments may be submitted by April 7, 2006 to:

Willa Williams
Department of Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey 08625

February 28, 2006-Fee:$83.62(74) 1638404

The Record

STATE OF NEW JERSEY
COUNTY OF PASSAIC SS:

Of full age, being duly sworn according to law, on his/her oath says that he/she is employed at North Jersey Media Group Inc., publisher of The Record. Annexed hereto is a true copy of the notice that was published on the following date(s):

2/28/06

in The Record, a newspaper of general circulation and published in Hackensack, in the county of Bergen and circulated in Bergen, Passaic, Hudson, Morris and Essex Counties. Said newspaper is published seven days a week.

Subscribed and sworn before me this

28 day of
Feb 2006
at West Paterson, NJ

Dorothy Zolnowski
A Notary Public of New Jersey

DOROTHY ZOLNOWSKI
Notary Public
State of New Jersey
My Commission Expires [illegible], 2007

STATE OF NEW JERSEY
CAMDEN COUNTY §

BRANDON HAWKINS

of full age, being duly sworn, according to law, says that he/she is bookkeeper of the

COURIER-POST

and that a Notice, of which the annexed is a true copy, was published daily in the *Courier-Post*, a newspaper printed and published daily in the county of Camden, Burlington and Gloucester, State of New Jersey, once on the

28 day of February A.D. 2006

Sworn and subscribed before me this 28th day of February A.D. 2006

Notary Public

DENNIS M. MAHONEY
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES 11/17/2003

2010
*N J DPT DEPE AI
CN 418 C/O DIANE HUTCHING
401 E STATE ST 2ND FLR
Trenton
NJ

Affidavit legal notices

NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
AIR QUALITY MANAGEMENT

Notice of proposed revisions to New Jersey State Implementation Plans covering the attainment and maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, the 1-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and submission of the 2002 Periodic Emission Inventory.

Public Notice

Take notice that the New Jersey Department of Environmental Protection (Department) is proposing revisions to the State Implementation Plans (SIP) that cover the attainment and maintenance of the 8-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the 1-hour ozone NAAQS and is proposing a fine particulate matter (PM2.5) NAAQS SIp for transportation conformity purposes. In addition, the 2002 Periodic Emission Inventory is being included for public review and comment.

Specifically, this SIP revision includes updated carbon monoxide and 1-hour ozone budgets for northern New Jersey for transportation conformity purposes. In addition, the general conformity emission budget for McGuire Air Force Base is proposed to be modified to ensure that increases in activity at the McGuire Air Force Base conform with the ozone SIP. The Department is proposing a fine particulate matter transportation conformity budget for northern New Jersey to be used by the Metropolitan Planning Organizations during the interim period prior to the establishment of PM2.5 budgets with the PM2.5 attainment demonstration SIP due in April 2008. The proposed carbon monoxide limited maintenance plan for Camden County and the nine not classified areas provides the second ten-year plan for compliance with the 8-hour carbon monoxide standard. The proposed 2002 periodic emission inventory provides the basis for reducing emissions in the State and in the region. The Department intends to submit an 8-hour ozone attainment demonstration SIP to the USEPA in June 2007, a Regional Haze SIP to the USEPA in December 2007, and a PM2.5 attainment demonstration in April 2008.

The Department is seeking comment from the public on these proposed SIP revisions. Written and/or oral testimony concerning the SIP revisions will be received at a public hearing held on:

March 31, 2006 at 10:00 a.m.
Public Hearing Room
Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625

This hearing is being held in accordance with the provisions of 42 U.S.C. Section 7410. Written comments may be submitted by April 7, 2006 to:

Willa Williams
Department of Environmental Protection
Bureau of Air Quality Planning
P.O. Box 418
Trenton, New Jersey

(897591) ($77.76)

Department, Division of Watershed Management, P.O. Box 418, 401 East State Street, Trenton, New Jersey 08625. The Department's file is available for inspection between 8:30 A.M. and 4:00 P.M., Monday through Friday. An appointment to inspect the documents may be arranged by calling the Division of Watershed Management at (609) 984-6888.

Interested persons may submit written comments on the amendment to WQM Program Docket, Division of Watershed Management, at the Department address cited above with a copy sent to Mr. James Biegen of Maser Consulting, One River Centre, Building 2, 331 Newman Springs Road, Red Bank, NJ 07701. All comments must be submitted within 30 days of the date of this public notice. All comments submitted prior to the close of the comment period shall be considered by the Department in reviewing the amendment request.

Interested persons may request in writing that the Department hold a nonadversarial public hearing on the amendment or extend the public comment period in this notice up to 30 additional days. These requests must state the nature of the issues to be raised at the proposed hearing or state the reasons why the proposed extension is necessary. These requests must be submitted within 30 days of the date of this public notice to the WQM Program Docket at the Department address cited above. If a public hearing is held, the public comment period in this notice shall be extended to close 15 days after the public hearing.

(a)

DIVISION OF WATERSHED MANAGEMENT

Adopted Amendment to the Lower Delaware Water Quality Management Plan

Public Notice

Take notice that on February 10, 2006, pursuant to the provisions of the New Jersey Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Statewide Water Quality Management Planning rules (N.J.A.C. 7:15-3.4), an amendment to the Lower Delaware Water Quality Management Plan was adopted by the Department of Environmental Protection (Department). This amendment, submitted on behalf of the Seabrook House, expands the sewer service area of the Cumberland County Utilities Authority (CCUA) Sewage Treatment Plant (STP) to provide sewer service to an existing drug rehabilitation/treatment facility which proposes to expand. The facility, known as Seabrook House, is located on a 39.79 acre parcel in Upper Deerfield Township identified as Block 501, Lot 9.01, and Block 502, Lot 17 on Polk Lane. The existing facility is currently served by multiple onsite septic systems. These systems do not have the capacity to receive the flow from the proposed expansion. The total sewage flow for the area to be included in the sewer service area amounts to 39,025 gallons per day (GPD) based on 203 beds at 175 GPD/Bed, 92 of which already exist, a cafeteria at 2,500 GPD, and a recreation center at 1,000 GPD. The sewer connection will be constructed as a force main in accordance with resolutions passed by both Upper Deerfield Township and CCUA. The sewer extension is dedicated for the sole use of the Seabrook House. No additional connections will be permitted to this force main. The CCUA STP has a design flow and a permitted flow of seven million gallons per day. No expansion of the CCUA STP is proposed to accommodate this project. The receiving water of the discharge is the Delaware River.

This amendment proposal was noticed in the New Jersey Register on September 19, 2005 at 37 N.J.R. 3731(b) and no comments were received during the comment period.

This amendment represents only one part of the permit process and other issues may need to be addressed prior to final permit issuance. Additional issues which may need to be addressed may include, but are not limited to, the following: compliance with stormwater regulations; antidegradation; effluent limitations; water quality analysis; exact locations and designs of future treatment works (pump stations, interceptors, sewers, outfalls, wastewater treatment plants); and development in wetlands, flood prone areas, designated Wild and Scenic River areas, or other environmentally sensitive areas which are subject to regulation under Federal or State statutes or rules.

(b)

ENVIRONMENTAL REGULATION

AIR QUALITY MANAGEMENT ELEMENT

Notice of Proposed Revisions to New Jersey State Implementation Plans Covering the Attainment and Maintenance of the Eight-Hour Carbon Monoxide National Ambient Air Quality Standard, the One-Hour Ozone National Ambient Air Quality Standard, and the Fine Particulate Matter National Ambient Air Quality Standard, and Submission of the 2002 Periodic Emission Inventory

Take notice that the New Jersey Department of Environmental Protection (Department) is proposing revisions to the State Implementation Plans (SIP) that cover the attainment and maintenance of the eight-hour carbon monoxide National Ambient Air Quality Standard (NAAQS) and the one-hour ozone NAAQS and is proposing a fine particulate matter ($PM_{2.5}$) NAAQS SIP for transportation conformity purposes. In addition, the 2002 Periodic Emission Inventory is being included for public review and comment.

Specifically, this SIP revision includes updated carbon monoxide and one-hour ozone budgets for northern New Jersey for transportation conformity purposes. In addition, the general conformity emission budget for McGuire Air Force Base is proposed to be modified to ensure that increases in activity at the McGuire Air Force Base conform with the ozone SIP. The Department is proposing a fine particulate matter transportation conformity budget for northern New Jersey to be used by the Metropolitan Planning Organizations during the interim period prior to the establishment of $PM_{2.5}$ budgets with the $PM_{2.5}$ attainment demonstration SIP due in April 2008. The proposed carbon monoxide limited maintenance plan for Camden County and the nine not classified areas provides the second ten-year plan for compliance with the eight-hour carbon monoxide standard. The proposed 2002 periodic emission inventory provides the basis for reducing emissions in the State and in the region. The Department intends to submit an eight-hour ozone attainment demonstration SIP to the USEPA in June 2007, a Regional Haze SIP to the USEPA in December 2007, and a $PM_{2.5}$ attainment demonstration in April 2008.

The Department is seeking comment from the public on these proposed SIP revisions. Written and/or oral testimony concerning the SIP revisions will be received at a **public hearing** held on:

Friday, March 31, 2006 at 10:00 A.M.
Public Hearing Room
Department of Environmental Protection
401 East State Street
Trenton, New Jersey 08625

This hearing is being held in accordance with the provisions of 42 U.S.C. §7410. **Written comments** may be submitted by April 7, 2006 to:

Willa Williams
Department of Environmental Protection
Bureau of Air Quality Planning
PO Box 418
Trenton, New Jersey 08625

The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions for the Attainment and Maintenance of the 8-Hour Carbon Monoxide National Ambient Air Quality Standard, 1-Hour Ozone National Ambient Air Quality Standard, and Fine Particulate Matter National Ambient Air Quality Standard; and the 2002 Periodic Emission Inventory

Appendix E: Public Participation

Attachment C: Response to Comment Document

May 2006

During the comment period, several comments were received by the State on the proposed SIP revision. The following is a summary of those comments, and the State's responses to those comments. After each comment is the name of the commentor(s) and their affiliation(s) in bold.

1) Comment: A comment was received that requested a summary of on-road mobile source emissions by vehicle class. Specifically the comment requested summaries of: 2002 annual and wintertime seasonal daily CO; 2002 ozone seasonal and annual VOC, NOx, and CO; and 2002 annual PM_{10}, $PM_{2.5}$, NH_3, and SO_2 on-road mobile source emissions by vehicle class. **(USEPA Region 2)**

Response: A file has been added to Attachment 18 that contains a summary of pollutant emissions by the 8 vehicle types. Please note that more detailed breakdowns of emissions by vehicle type (both 8 and 28 vehicle classes), by roadway type for each county are also provided in Attachment 18 in separate files for the three Metropolitan Planning Organization (MPO) areas in New Jersey. Separate files are provided for summer, winter and annual conditions as well as for $PM_{2.5}$ and PM_{10} because separate MOBILE6 model runs need to be performed for each. A statewide summary by county is also provided in Attachment 18.

2) Comment: A comment was received that requested a further breakout of emission benefits attributable to the Federal and State on-road mobile source control measures for the 2009 PM2.5 and annual NOx emission estimates. **(USEPA Region 2)**

Response: In response to this comment a breakout of the contribution of the 2009 New Jersey on-road mobile source control measures (I/M program) towards reducing the 2009 Uncontrolled on-road emissions of PM2.5 and NOx has been prepared. These benefits have been added to the spreadsheets in Attachments I-C(a) and I-C(b).

3) Comment: The Air Force commented on the note under Table ES3, Emission Budgets for McGuire Air Force Base, on page (xi) of the proposed SIP revision. The second sentence of the note states, "Updated 2005 budgets apply to 2005 and all future years until new budgets are established for the 8-hour ozone attainment demonstration." The comment submitted requested that New Jersey change the footnote to state that the amended budgets take effect in 2006, not 2005. (**John Hoertz, Air Force Center for Environmental Excellence**)

Response: The State has amended the footnote to reflect that the updated 2005 budgets apply to all future years until new budgets are established for the 8-hour ozone attainment demonstration.

4) Comment: One commenter requested that the NJDEP use the LandGEM emissions model (version 2.01) in the calculations for estimated landfill emissions in the area source inventory, or use one of the other options suggested in the Emission Inventory Improvement Program Guidance, Volume 3, Area Sources, Chapter 15, such as conducting a survey or using a default per capita emission factor. **(USEPA Region 2)**

Response: The NJDEP revised the area source landfill emissions prior to the February 2006 proposal of the inventory. The USEPA Landfil2 and the updated Landgems 3.02 models were both used to calculate estimated emissions in tons/yr out to 2017. Originally the USEPA Landfil2 model was applied to calculate emissions for 373 landfills. The Landgems 3.02 model was applied to the 17 major municipal solid waste landfills to determine their actual emissions with this updated model. In addition, a sensitivity analysis was conducted to compare results between the two models. This sensitivity analysis determined that the updated Landgems 3.02 model increased emissions by approximately nine percent. Accordingly a scaled factor was applied to the balance of the landfill emissions by this amount to approximate application of the updated Landgems 3.02 model to the rest of the landfills. The total area source landfill emissions increased from 547 tons per year of volatile organic compounds (VOC) to 563 tons per year of VOC. The final numbers were reflected in the proposed February 2006 inventory. A revised Area Source Calculation Methodology Sheet, has been included in the adoption of the inventory in Attachment 11, page 178 of the Final Inventory Report.

NJDEP Initiated Change to Proposed SIP

A revision was made to the point source carbon monoxide (CO) tons per summer day emissions. The revision was updated in the 2002 Periodic Emission Inventory tables as well as Appendix D and now correctly matches Attachment 6 of Appendix D.