

**The State of New Jersey  
Department of Environmental Protection**

**Proposed 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**

**February 4, 2000**

## **Preface**

This document is a proposed revision to the State of New Jersey's plan to demonstrate attainment with the 1-Hour Ozone National Ambient Air Quality Standard, in accordance with the Clean Air Act and the Alternative Ozone Attainment Demonstration Policy issued by the USEPA (the USEPA memorandum titled "Ozone Attainment Demonstrations," Mary D. Nichols, Assistant Administrator for Air and Radiation, March 2, 1995). Its purpose is to address USEPA - identified requirements for a commitment to obtain additional emission reductions and the setting of attainment year transportation conformity budgets as described in the proposed USEPA rule 40 C.F.R. Part 52 (64 Fed. Reg. 70380, December 16, 1999).

## **Acknowledgments**

The New Jersey Department of Environmental Protection (NJDEP) acknowledges the efforts and assistance of the agencies, organizations, and individuals whose contributions were instrumental in the preparation of this State Implementation Plan Revision.

In particular, the NJDEP wishes to acknowledge the individuals within the New Jersey Department of Transportation, the Delaware Valley Regional Planning Commission, the North Jersey Transportation Planning Authority, the South Jersey Transportation Planning Organization, the United States Environmental Protection Agency Region II and III, the Connecticut Department of Environmental Protection, the New York State Department of Environmental Conservation, and the Ozone Transport Commission for their assistance and guidance.

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## Acronyms and Abbreviations

AIM	Architectural and Industrial Maintenance
CAA	Clean Air Act
Department	New Jersey Department of Environmental Protection
DV	Design Value
DVRPC	Delaware Valley Regional Planning Commission
EGU	Electric Generating Unit
MVEB	Motor Vehicle Emission Budget
NET	National Emission Trends
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standard
NJ	New Jersey
NJDEP	New Jersey Department of Environmental Protection
NJTPA	North Jersey Transportation Planning Authority
N.J.A.C.	New Jersey Administrative Code
NLEV	National Low Emission Vehicle
NO <sub>x</sub>	Nitrogen Oxides
OTR	Ozone Transport Region
PPB	Parts Per Billion
RACT	Reasonable Available Control Technology
Regional NO <sub>x</sub> Cap	The Proposed USEPA Regional NO <sub>x</sub> Emission Reduction Program
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SJTPO	South Jersey Transportation Planning Organization
TCB	Transportation conformity Budget
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

## Executive Summary

Ozone is a highly reactive gas formed in the lower atmosphere or troposphere from the chemical reaction involving oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) in the presence of sunlight. At elevated levels, it causes a variety of human health effects as well as damage to crops and materials. The United States Environmental Protection Agency (USEPA) is required by the Clean Air Act to set health and welfare standards for air pollutants. These standards are known as the National Ambient Air Quality Standards (NAAQS). The USEPA has established such standards for ozone. Despite substantial federal and state efforts over the past two decades, attainment of the ozone health standard has not been achieved in New Jersey as well as many other areas throughout the country, although significant progress has been made.

Among the provisions of the Clean Air Act is the requirement that areas with ozone concentrations above certain levels demonstrate that their plans will meet the health standard within the time frame required by the Clean Air Act. New Jersey is required to make such a demonstration for the eighteen of its twenty-one counties that have not been designated as in attainment with the NAAQS for ozone. These counties are associated with two multi-state nonattainment areas; ones included in the Philadelphia-Wilmington-Trenton nonattainment area or Air Quality Control Region, and the counties included in the New York-Northern New Jersey-Long Island nonattainment area or Air Quality Control Region.

In a prior such demonstration (the Phase II Ozone SIP Submittal of August 31, 1998), the State provided air quality projections demonstrating that, under certain conditions conducive to high ozone concentrations, attainment was plausible without the need for further emission reductions beyond the mandated Clean Air Act measures and the Regional NO<sub>x</sub> reductions as embodied in the USEPA NO<sub>x</sub> SIP call<sup>†</sup>. The demonstration also identified and quantified certain uncertainties in the projections. In reviewing New Jersey's and other states' demonstrations, the USEPA performed its own analyses and determined that further emission reductions are necessary for attainment. The USEPA results are provided in Table ES-1 for the multi-state nonattainment areas that encompass most of New Jersey. The emission reductions in Table ES-1 already assume a USEPA - calculated credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

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<sup>†</sup>63 Fed. Reg. 57356 (October 27, 1998).

**Table ES - 1: Additional Emission Reduction Required in Multi-state-state Nonattainment Areas After Credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program**  
(1)

Area	1990 Emissions - tons per day -		Emission Reductions - % of 1990 emissions -		Emission Reductions - tons per day -	
	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>
New York (NY) - Northern New Jersey (NJ) - Long Island Nonattainment area, NJ, NY, CT, 2007 attainment date	2214	2052	3.8	0.3	85	7
Philadelphia-Wilmington-Trenton Nonattainment area, NJ, PA, DE, MD, 2005 attainment date	1380	1010	4.5	0.3	61.8	3.4

(1) The mix of VOC and NO<sub>x</sub> reductions shown may be changed in the future by substituting NO<sub>x</sub> for VOC, or vice-versa, on an equivalent ozone reduction basis, consistent with the Clean Air Act and USEPA Guidance<sup>††</sup>

As described in Part III of this State Implementation Plan (SIP) revision, the USEPA results are reasonably similar to the prior New Jersey results quantifying the uncertainties involved in these air quality projections. Therefore, considering the USEPA and the prior state analyses, the State is proposing to commit to a process designed to secure its fair share of the additional emission reductions identified by the USEPA in Table ES-1. Assuming that the percentage reduction identified by the USEPA is distributed proportionately based on New Jersey's contribution to the emissions in the full nonattainment areas, the New Jersey obligation for emission reduction would be as shown in Table ES-2.

Further, the State supports the need for the USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program and agrees that the benefits from that program are essential to reduce the emission shortfalls to the levels shown in Table ES-2. Therefore the State is proposing to revise its prior transportation conformity budgets or motor vehicle emission budgets (MVEB's) to reflect the inclusion of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program. The resulting budgets are summarized in Table ES-3 below. Additionally, the NJDEP is proposing to

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<sup>††</sup>USEPA Memorandum, Clarification of Policy for Nitrogen Oxides (NO<sub>x</sub>) Substitution, August 5, 1994.

reserve 50% of the incremental<sup>†††</sup> benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in the years beyond the attainment years for air-quality purposes.

**Table ES-2: USEPA - Identified Additional Emission Reductions - Apportioned to New Jersey**

	VOCs (tons/day)		NO <sub>x</sub> (tons/day)	
	Total for Area	New Jersey Proportion	Total for Area	New Jersey Proportion
New York-Northern New Jersey - Long Island nonattainment area*	85	36.5	7	3.4
Philadelphia-Wilmington-Trenton nonattainment area**	61.8	20.7	3.4	1.3
Total Emission reductions for both severe nonattainment areas in New Jersey		57.2		4.7

\* Apportionment to New Jersey based a 951 ton per day VOC and 1012 ton per day NO<sub>x</sub> contribution from New Jersey to the nonattainment area in 1990, per the USEPA Technical Support Document for the New York City Ozone Nonattainment Area, December 13, 1999.

\*\* For the Philadelphia nonattainment area, the apportionment to NJ is based on a 33.55% NJ VOC contribution and a 38.42% NJ NO<sub>x</sub> contribution to the area's 1990 inventory, from USEPA National Emission Trends (NETs) emissions data. (This data was provided via an e-mail transmission from Robert Kelly of USEPA Region II to Robert Stern and Chris Salmi of the NJDEP on January 6, 2000).

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<sup>†††</sup>The incremental benefit is the difference between the emission benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in a year beyond the attainment year and the emissions benefit of the Program in an attainment year.

**Table ES-3: Revised Transportation Conformity Budgets Incorporating the Benefits From the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program**

Transportation Planning Area	Attainment Year	Transportation Conformity Budgets	
		VOC -in tons per day-	NO <sub>x</sub> -in tons per day-
North Jersey Transportation Planning Authority (NJTPA)	2007	77.72	170.89
South Jersey Transportation Planning Organization (SJTPO)	2005	10.19	24.81
Delaware Valley Regional Planning Commission (DVRPC)	2005	32.40	58.86

## **I. Introduction**

This proposed revision to the New Jersey State Implementation Plan (SIP) for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards (NAAQS) provides: (a) an enforceable commitment by New Jersey to adopt sufficient measures to address its fair share of the level of additional emission reductions recently identified by the USEPA<sup>1</sup>, and to revise its Attainment Demonstration accordingly to reflect those measures; (b) a revised transportation conformity budget that includes the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program benefits; (c) an enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity budgets to reflect any adopted additional measures (beyond the Tier 2 Motor Vehicle Standard / Low Sulfur Program) pertaining to motor vehicles; (d) an enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity budgets, within one year after the MOBILE6 model is released and required for use in the development of SIPs; (e) 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 (f) an enforceable commitment to perform a midcourse review by December, 2003.

## **II. Current Ozone Air Quality**

The regulatory measure for attainment of the 1-hour ozone standard is called the "1-hour design value." The design value for a particular monitoring site is the fourth highest ozone concentration at the site over consecutive, 3-year periods. The design value for an area is the highest design value for all the monitoring sites in the area. New Jersey's ozone monitoring sites are shown in Figure 1.

The trends in 1-hour design values for monitoring sites in Southern New Jersey, and Central and Northern New Jersey are illustrated in Figures 2 and 3 respectively. The 1-hour ozone standard is 0.12 ppm, which is rounded to 124 ppb for operational monitoring purposes.

On July 18, 1997, the United States Environmental Protection Agency (USEPA) found that the National Ambient Air Quality Standard (NAAQS) for ozone was no longer sufficiently protective of public health. As such, the USEPA established a new ozone health standard 0.08 parts per million (ppm) averaged over an 8-hour period. In accordance with Section 107(d)(1) of the Clean Air Act (CAA) and Section 6103(a) of TEA-21, each Governor would be required to submit to the USEPA, by July of 1999, recommended designation(s) for the 8-hour ozone NAAQS attainment status for areas within his or her state and the boundaries for each non-attainment area. On June 25, 1999 the USEPA requested<sup>2</sup> air quality monitoring data relative to the 8-hour standard. However, the recent Court of Appeals opinion regarding the 8-hour ozone

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<sup>1</sup>64 Fed. Reg. 70380, December 16, 1999.

<sup>2</sup>USEPA Memorandum, Designations for the 8-Hour Ozone NAAQS, June 25, 1999.

NAAQS<sup>3</sup> has injected some uncertainty as to area classifications and their ultimate attainment dates and implementing schedules.

The regulatory measure for the USEPA's 8-hour standard is termed the "8-hour design value," and is the 3 year average of the 4th highest 8-hour averaged ozone concentration at a monitoring site for each year. The trends in the 8-hour design value are shown in Figures 4 and 5 for Southern New Jersey, and Central and Northern New Jersey respectively.

Implementation of the 8-hour ozone standard, including designations of nonattainment areas is on hold pending final review of legal challenges. However, it can be seen from Figures 4 and 5 that the current, i.e., 1998 and 1999 8-hour design values at all of the monitoring sites in New Jersey are above the current standard of 0.8 ppm, which for operational monitoring purposes is rounded up to 84 ppb. This data has been entered into the USEPA's Aerometric Information and Retrieval System (AIRS).

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<sup>3</sup>American Trucking Association v. USEPA, 195 F.3d 4 (D.C. Circuit 1999).

Figure 1: New Jersey's Ozone Monitoring Sites

# *New Jersey's Ozone Monitoring Network*

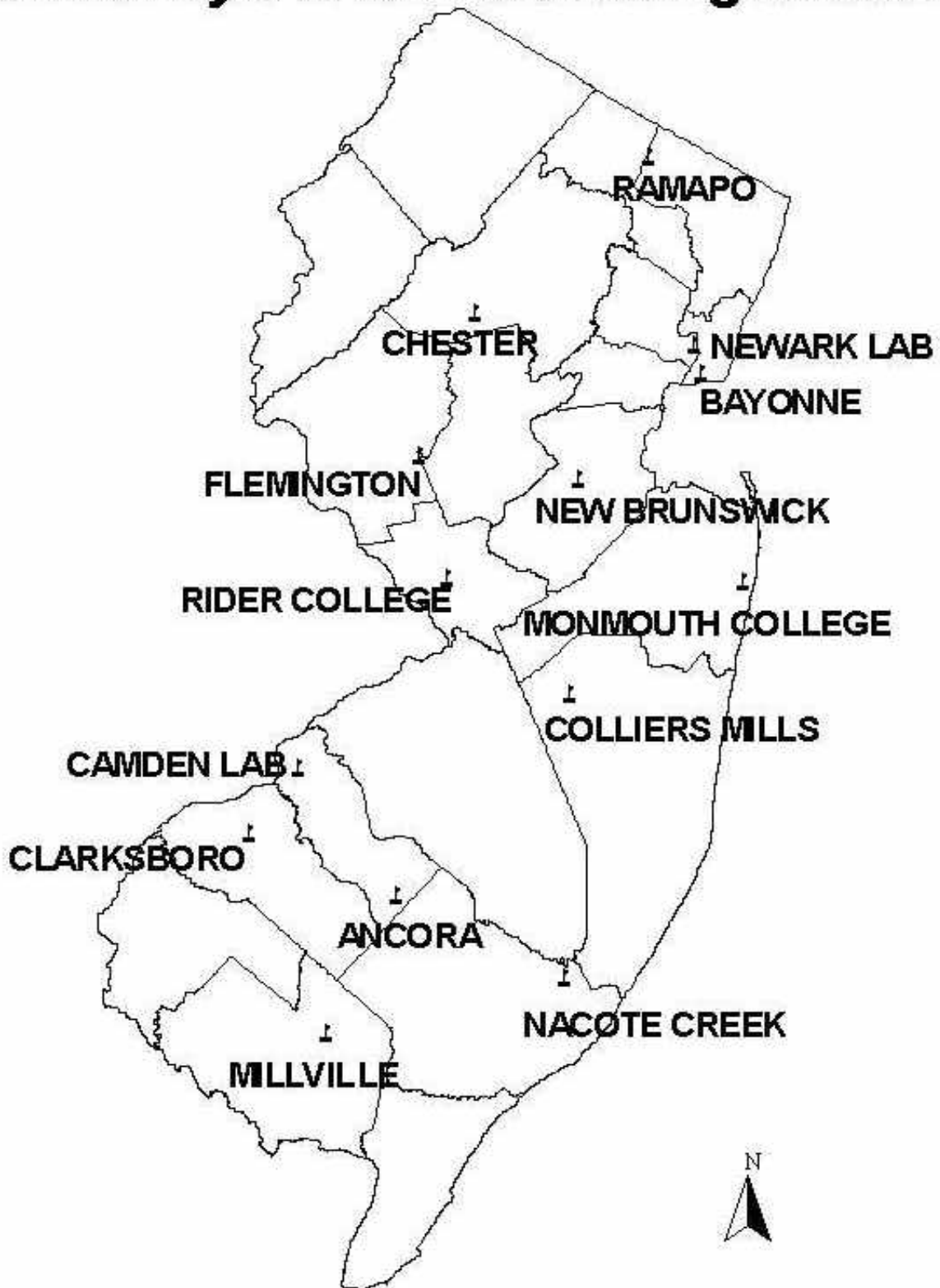
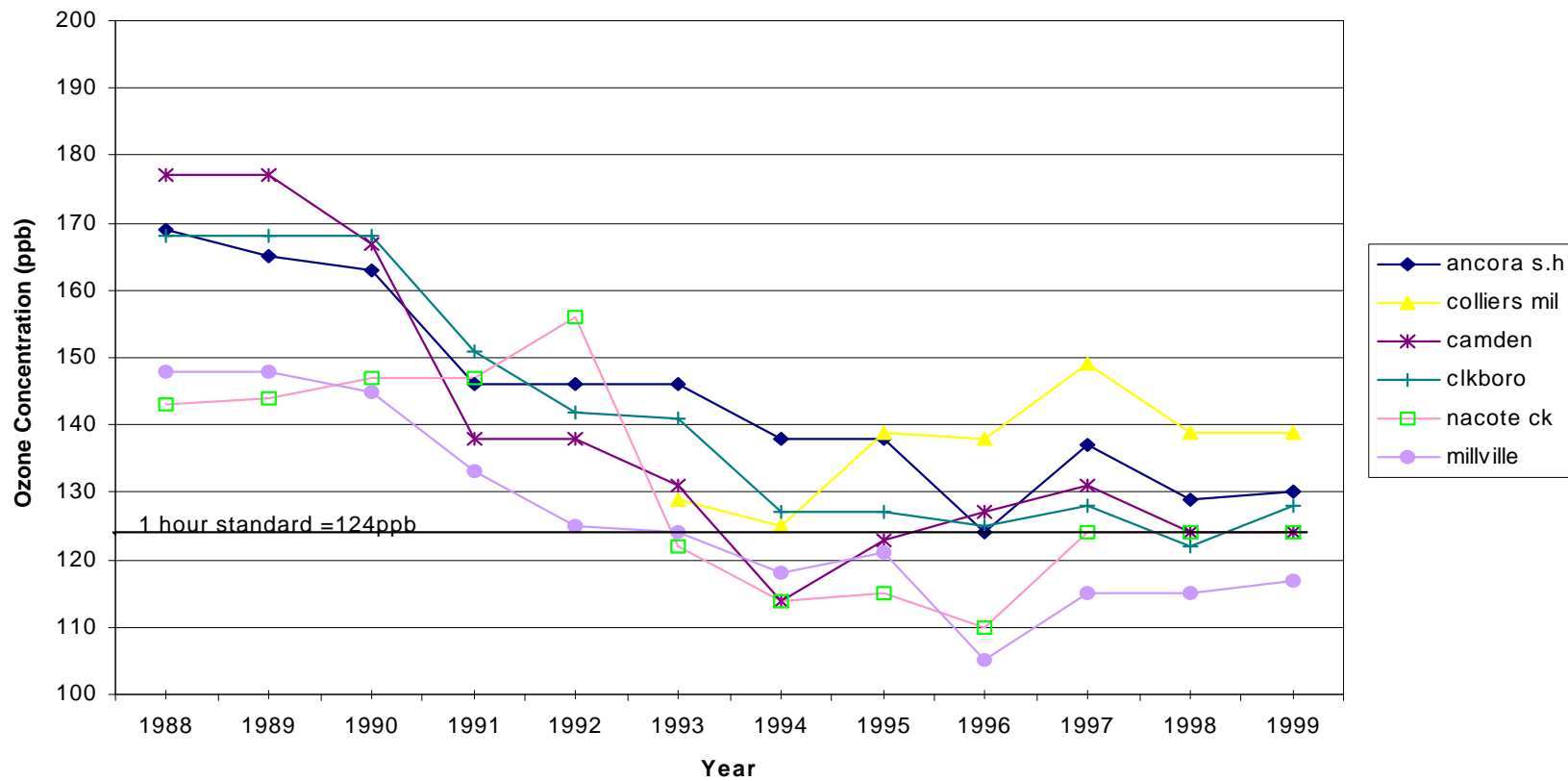


Figure 2: 1-Hour Design Values-Southern New Jersey



**Figure 3: 1-Hour Design Values-Northern & Central New Jersey**

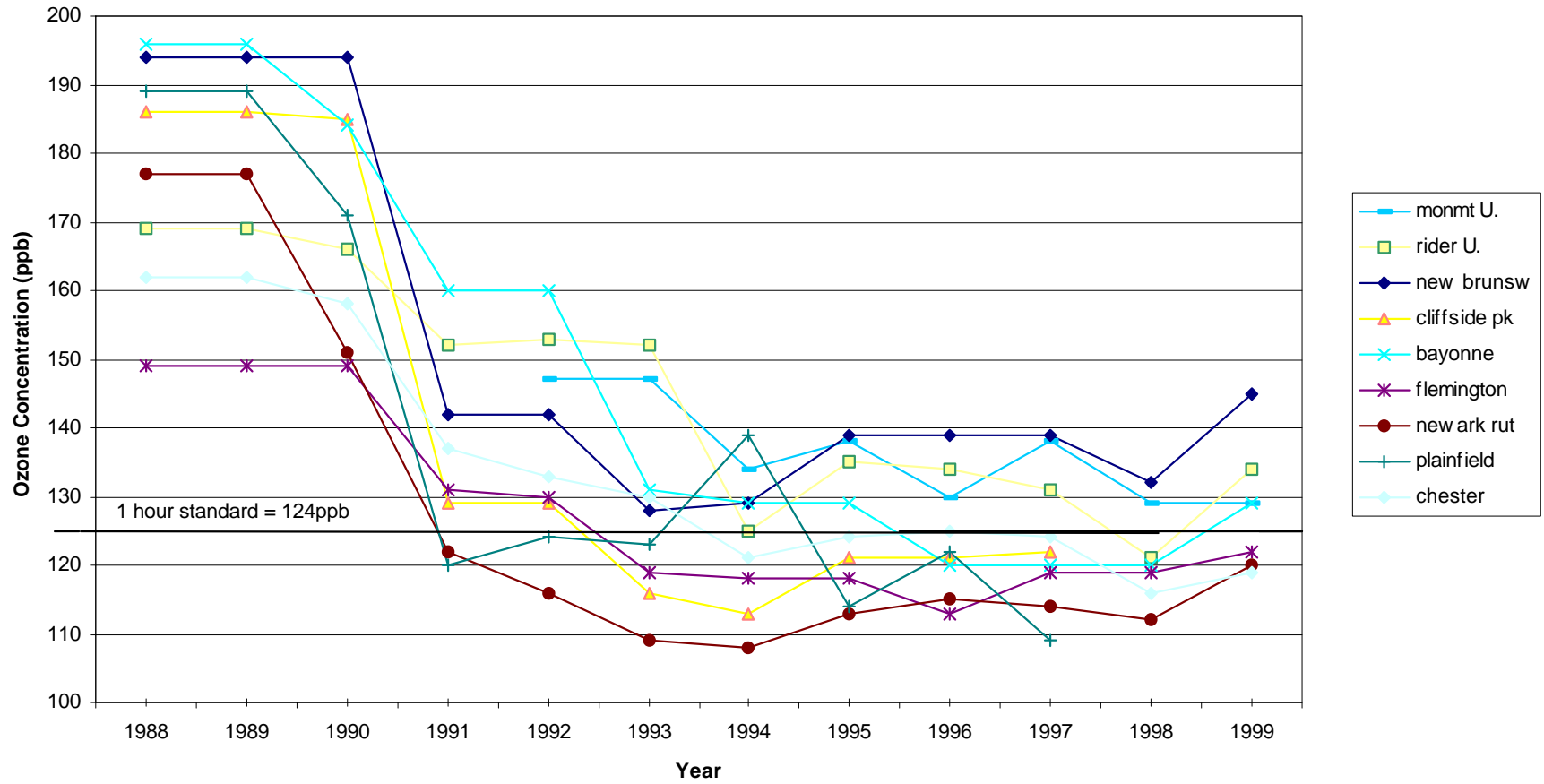


Figure 4: 8-Hour Design Values-Southern New Jersey

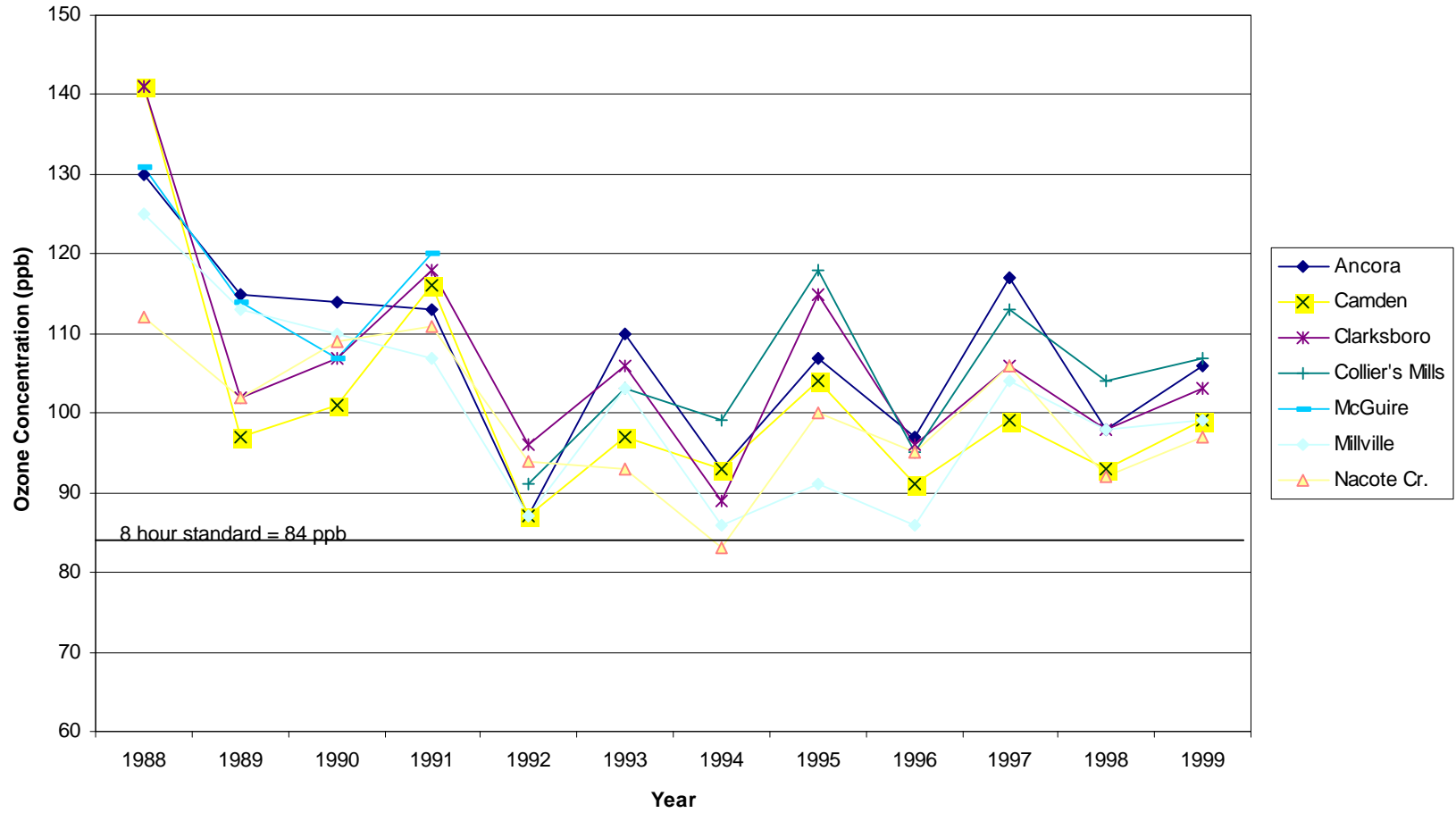
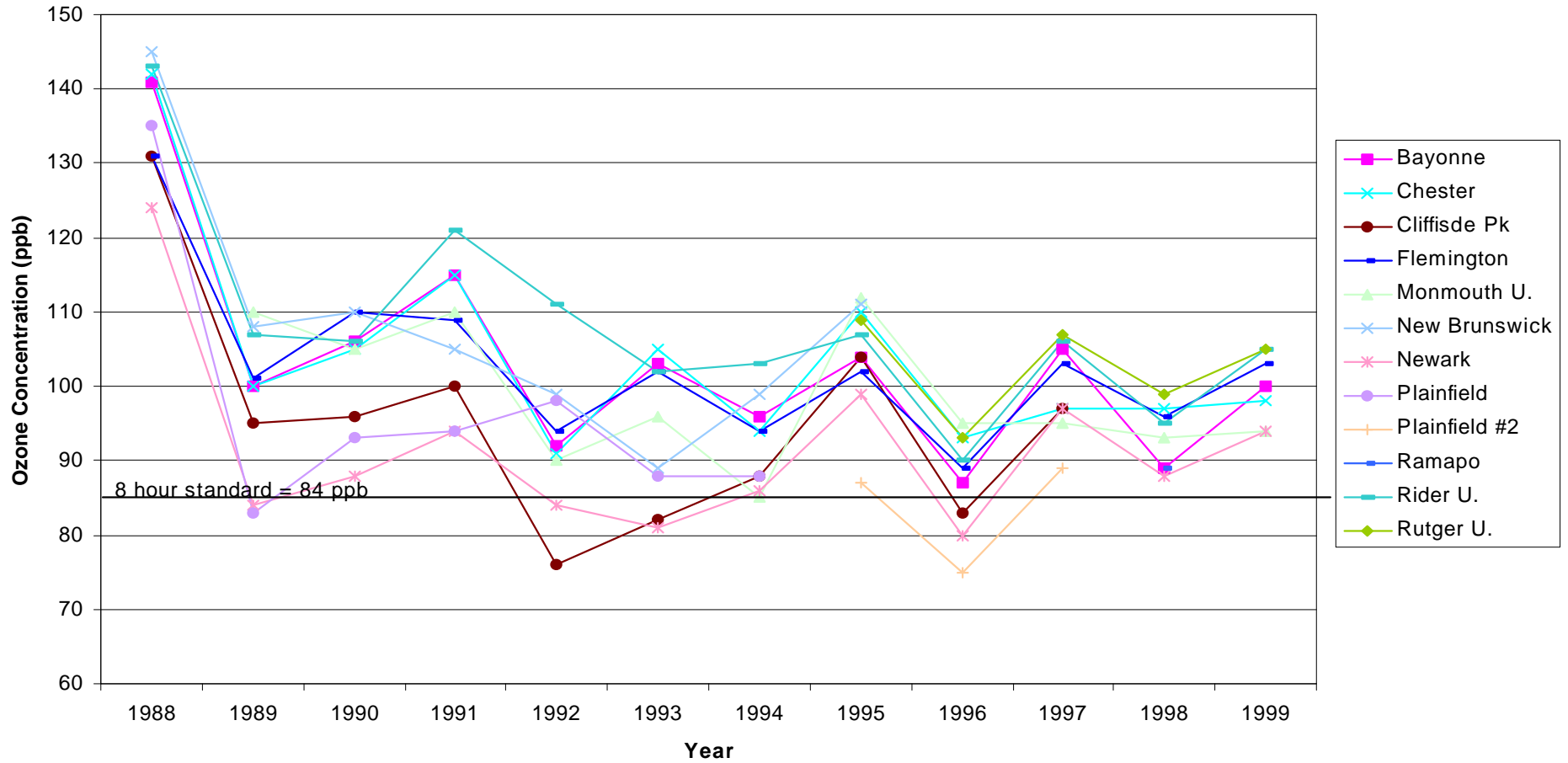


Figure 5: 8-Hour Design Values-Northern & Central New Jersey



### III. Background

#### A. Phase II Ozone SIP (Attainment Demonstration).

On August 31, 1998, New Jersey submitted to the USEPA<sup>4</sup> a SIP revision "Attainment and Maintenance of the Ozone National Ambient Air Quality Standards - Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy." This document is referred to as the Ozone Attainment Demonstration SIP by the USEPA or alternatively as the Phase II Ozone SIP. This SIP submittal addressed the USEPA requirements related to attainment of the 1-hour NAAQS for ozone as contained in a March 2, 1995 memorandum from Mary Nichols and a December 29, 1997 memorandum from Richard D. Wilson. This submittal included: a demonstration of attainment of the 1-hour NAAQS for Ozone for the Philadelphia-Southern and Central New Jersey, and the New York-Northern New Jersey-Southern Connecticut areas; a list of control measures adopted to date; and commitments to:

- 1) submit post-1999 Rate of Progress (ROP) Plans and to submit adopted regulations by December 31, 2000, needed to achieve post-1999 emission reductions;
- 2) implement the New Jersey portion of the EPA regional NO<sub>x</sub> cap (NO<sub>x</sub> SIP Call);
- 3) undertake a midcourse review and submit a report to the USEPA by December 31, 2002;
- 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 mid-course review which are necessary for attainment;

#### B. Previous New Jersey Results Regarding the Need for Additional Emission Reductions

In its August 31, 1998 Attainment Demonstration, New Jersey utilized photochemical air quality modeling in a "rollback" mode<sup>5</sup> with other "weight of evidence" analyses to project ozone concentrations in the attainment years for the Philadelphia-Southern and Central New Jersey and Northern New Jersey-New York Metropolitan - Southern Connecticut areas respectively.

With respect to the Philadelphia-Southern and Central New Jersey area, the demonstration showed that attainment was plausible using 1996 one-hour ozone design value levels as the starting point for the analysis. The analyses demonstrated that no new additional emission reductions beyond Clean Air Act mandated measures and the USEPA Regional NO<sub>x</sub> emission caps were necessary for attainment. However an uncertainty in the demonstration was

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<sup>4</sup>NJ SIP Revision, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Phase II Ozone Submittal, August 31, 1998.

<sup>5</sup>The "rollback" method utilizes current monitored ozone levels multiplied by the ratio of air quality-modeled ozone concentrations with current and future projected emissions to predict future air quality, i.e., ozone levels.

acknowledged related to a higher 1995-1997 design value at the Colliers Mills monitoring site. Although this higher value was not expected to persist, an analysis of this issue<sup>6</sup> in the demonstration indicated the possible need for additional emission reductions to provide a 6 parts per billion (ppb) further ozone reduction. Using ozone/emission sensitivity factors from Table I-2 in Appendix I of the New Jersey Phase II Ozone SIP, adjusted to 1990 emission inventory levels, this would require an additional 10% NO<sub>x</sub> or 13% VOC emission reduction.

Regarding the Northern New Jersey-New York Metropolitan-Southern Connecticut area, using 1998 one-hour ozone design value data as the starting point for the demonstration, attainment of the 1-hour ozone NAAQS was plausibly demonstrated in the area with the implementation of mandated Clean Air Act measures and the USEPA Regional NO<sub>x</sub> caps. The uncertainty in this demonstration was also noted primarily with respect to the starting design value. An analysis in the SIP, using a 5 year average of design values as the starting point for the projection suggested that an additional 11% VOC or 12% NO<sub>x</sub><sup>7</sup> emission reduction, relative to 1990 levels, could be needed to attain the 1-hour ozone standard.

### C. Recent USEPA Analysis

The USEPA has recently concluded its own analysis and attainment projections<sup>8</sup> for the Philadelphia-Wilmington-Trenton and New York-Northern New Jersey-Long Island nonattainment areas. The New Jersey portions of these nonattainment areas are depicted in Figure 6.

With regard to the Philadelphia-Wilmington-Trenton nonattainment area, the USEPA found that additional emission reductions are needed to more conclusively predict attainment. The additional reductions needed in the Philadelphia-Wilmington-Trenton nonattainment area prior to taking credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program were estimated at 4.8% VOC and 2.5% NO<sub>x</sub>, or a sum of percentage VOC and NO<sub>x</sub> reductions of 7.3%<sup>9</sup>.

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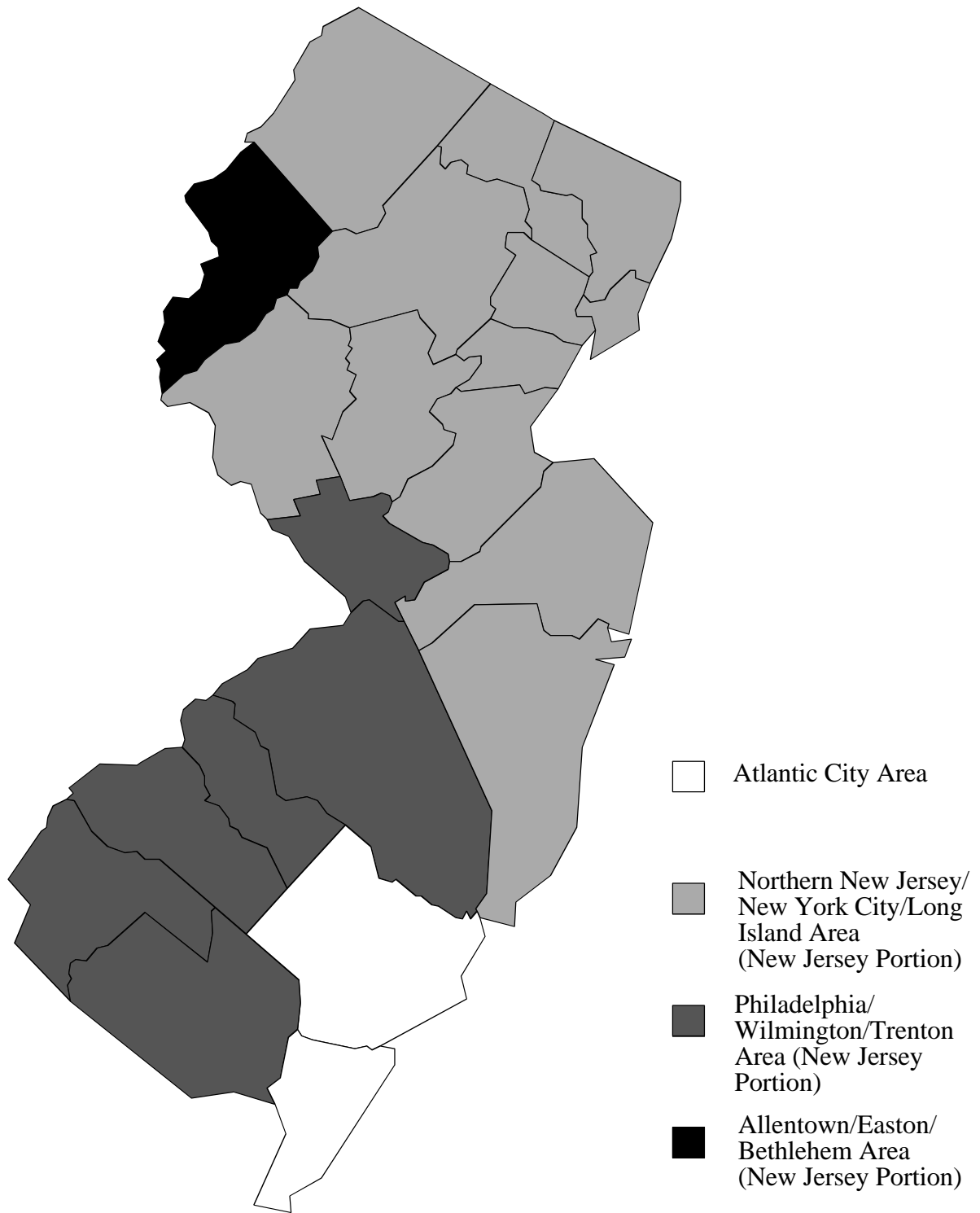
<sup>6</sup>NJDEP, Phase II Ozone SIP, August 31, 1998, page 60.

<sup>7</sup>New Jersey Phase II Ozone SIP; page 79.

<sup>8</sup>64 Fed. Reg. 70380, December 16, 1999.

<sup>9</sup>USEPA Region II: Technical Support Document for the Trenton, New Jersey portion of the Philadelphia Ozone nonattainment Area, December 14, 1999.

**Figure 6: Air Quality Regions in New Jersey**



With respect to the New York-Northern New Jersey-Long Island nonattainment area, the USEPA analysis likewise concluded<sup>10</sup> that additional emission reductions are needed to more conclusively predict attainment. These reductions, prior to taking credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, were estimated at 4.15% VOC and 3.05% NO<sub>x</sub> or a sum of percentage VOC and NO<sub>x</sub> reductions of 7.2%.

A comparison of the New Jersey and the USEPA analyses, regarding the extent of additional emission reductions required, prior to taking credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, as discussed later, is provided in Table 1 below.

**Table 1: Additional Emission Reductions - Sum of % VOC Plus % NO<sub>x</sub> Relative to 1990 Emissions Before the Application of Credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Program**

	<b>Philadelphia- Wilmington- Trenton Area</b>	<b>New York- Northern New Jersey- Long Island Area</b>
<b>USEPA</b>	<b>7.3</b>	<b>7.2</b>
<b>NJ</b>	<b>10-13*</b>	<b>11-12**</b>

\* Derived from New Jersey Phase II Ozone SIP: page 60 and Appendix I.

\*\* From New Jersey Phase II Ozone SIP: page 79

The results of both analyses are reasonably consistent considering the uncertainties in future year air quality demonstrations, with the New Jersey estimates somewhat higher than the USEPA estimates. These uncertainties stem from year-to-year variations in the "current" design values that are used as the starting point for the projections and uncertainties in the models used to project future air quality levels.

D. Additional USEPA-Identified Emission Requirements after Credit for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

On December 21, 1999, the USEPA Administrator Browner signed regulations implementing a Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program to reduce emissions from motor vehicles. This program provides a significant measure toward achieving

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<sup>10</sup>USEPA Region II: Technical Support Document, Modeling for the NYC Ozone Non-attainment area; December 13, 1999.

attainment with the ozone health standard. The USEPA has estimated the benefits<sup>11</sup> from the proposed Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program. For the Philadelphia-Wilmington-Trenton area, after taking credit for the USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, the remaining additional reduction estimated is 4.5 percent in VOCs and 0.3 percent in NO<sub>x</sub> relative to the 1990 emission inventory. This is equivalent to remaining emission reductions in the multi-state Philadelphia-Wilmington-Trenton Nonattainment area of 61.8 tons of VOC per summer day and 3.4 tons of NO<sub>x</sub> per summer day. For the multi-state New York-Northern New Jersey-Long Island Nonattainment area, after taking credit for the USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Program, the remaining additional reductions estimated to be needed by the USEPA is a 3.8 percent reduction in VOCs and a 0.3 percent reduction in NO<sub>x</sub>, relative to the 1990 emission inventory. This is equivalent to remaining additional emissions in the New York-Northern New Jersey-Long Island Nonattainment area of 85 tons of VOC per summer day and 7 tons of NO<sub>x</sub> per summer day. These results are summarized in Table 2.

**Table 2: Additional Emission Reduction Required in Multi-state Nonattainment Areas After Credit for Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Emission Benefit \***

Area	1990 Emission Reductions -tons per day-		Emission Reductions -% of 1990 emissions-		Emission Reductions -tons per day-	
	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>
New York (NY) - Northern New Jersey (NJ) - Long Island (LI) nonattainment area, NJ, NY, CT, 2007 attainment date**	2214	2052	3.8	0.3	85	7
Philadelphia-Wilmington-Trenton nonattainment area, NJ, PA, DE, MD, 2005 attainment date***	1380	1010	4.5	0.3	61.8	3.4

\* The mix of VOC and NO<sub>x</sub> reductions shown may be changed in the future by substituting NO<sub>x</sub> for VOC, or vice-versa, on an equivalent basis, consistent with USEPA Policy.

\*\* USEPA; Technical Support Document, Modeling for the NYC Ozone Nonattainment Area, December 13, 1999.

\*\*\* USEPA; Technical Support Document for the Trenton, New Jersey portion of the Philadelphia Ozone Nonattainment Area, December 14, 1999.

These emission shortfalls identified by the USEPA for the New York-Northern New Jersey-Long Island and the Philadelphia-Wilmington-Trenton nonattainment areas are also

<sup>11</sup>USEPA Memorandum: 1-Hour Ozone Attainment Demonstrations and Tier 2 Motor Vehicle / Sulfur Rulemaking. November 8, 1999.

provided in Table 3 by tons per day with a breakdown for New Jersey. The New Jersey share of the emission reduction is derived by assuming that the percentage reduction identified by the USEPA is distributed proportionately<sup>12</sup> based on the State's 1990 emission inventories within the nonattainment area.

**Table 3: USEPA - Identified Additional Emission Reductions - Apportioned to New Jersey in Proportion to 1990 State Emission Inventory Contributions to the Nonattainment Area**

	VOCs (tons/day)		NO <sub>x</sub> (tons/day)	
	Total for Area	NJ	Total for Area	NJ
New York-Northern NJ-Long Island nonattainment area*	85	36.5	7	3.4
Philadelphia-Wilmington-Trenton nonattainment area**	61.8	20.7	3.4	1.3
Total Emission reductions for both severe nonattainment areas in NJ		57.2		4.7

\* Apportionment to New Jersey based a 951 ton per day VOC and 1012 ton per day NO<sub>x</sub> contribution from New Jersey to the nonattainment area in 1990, per the USEPA Draft Technical Support Document for the New York City Metro Area Attainment Demonstration, November 29, 1999.

\*\* For the Philadelphia nonattainment area, the apportionment to NJ is based on a 33.55% NJ VOC contribution and a 38.42% NJ NO<sub>x</sub> contribution to the area's 1990 inventory, from USEPA National Emission Trends (NETs) emissions data.

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<sup>12</sup>As the effort evolves, the involved states may agree to other apportionments - as long as the overall percentage and tonnage reductions for the nonattainment area are met.

## IV. Transportation Conformity Budgets

### A. Background and Requirements for Finding a Transportation Conformity Budget Adequate.

The recent USEPA proposed rulemaking<sup>13</sup> presents the requirements placed on a state in order for the USEPA to find a transportation conformity budget adequate and to approve attainment demonstrations. Regarding transportation conformity, in order for the USEPA to complete its transportation conformity adequacy determination by May 31, 2000, each state was required to submit a transportation conformity budget by no later than April 15, 2000 that is consistent with its attainment demonstration<sup>14</sup>. Also, this revised budget would be submitted with a commitment to adopt sufficient measures to address the required level of additional emission reductions identified by the USEPA. In accordance with USEPA Guidance,<sup>15</sup> a state may choose to include preliminary Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program benefits in this submittal. If a state chooses not to include these benefits in its SIP submittal, then Metropolitan Planning Organizations may not use the emission reductions from that program in conformity determinations until the State revises the budgets to account for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program benefits.

Additionally, in order for the USEPA to find the motor vehicle emissions budget adequate for conformity purposes, the state would need to identify an initial list of possible control measures that could provide for the additional emission reductions as identified as necessary by the USEPA (see Table 2). The USEPA stipulated that these measures may not involve additional limits on highway construction beyond those that could be imposed under the submitted motor vehicle emissions budget. However, a state need not commit to adopt any specific measure(s) on their list at this time. In satisfying the additional emission reductions, a state is not restricted to the list and could choose other measures that may prove feasible. It is also not necessary for a state to evaluate each and every measure on the list.

Further, a state must submit an enforceable commitment to revise its transportation conformity budgets within one year after the EPA's release of MOBILE6.

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<sup>13</sup>64 Fed. Reg. 70380, December 16, 1999.

<sup>14</sup>On December 10, 1999, New Jersey submitted such a transportation conformity budget, which is updated herein to account for the new Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

<sup>15</sup>Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Attainment Demonstrations," from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I-VI. November 3, 1999. Web site: <http://www.epa.gov/ome/transp/traqconf.ht>

Finally, a state must commit to recalculate and submit a revised motor vehicle emissions budget if any of the additional emission reductions pertain to motor vehicle measures. This must be completed when the measures are submitted as a SIP revision.

#### B. New Jersey Actions and Commitments to Meet the USEPA Transportation Conformity Requirements.

On December 10, 1999 New Jersey submitted<sup>16</sup> to the USEPA a transportation conformity budget incorporating the control measures that are consistent with its previous Attainment Demonstration (Phase II Ozone SIP). That submittal, however, did not include the above - mentioned commitments to update transportation conformity budgets to account for the MOBILE6 model or any new highway measures, nor the benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

To meet the requirements described in Section IV A. above, the transportation conformity budget provided in Section IV.C. includes the benefits of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program. Control measures are discussed in Part V of this SIP revision. The necessary commitments are included in Part VI of this SIP revision.

#### C. Transportation Conformity Budgets

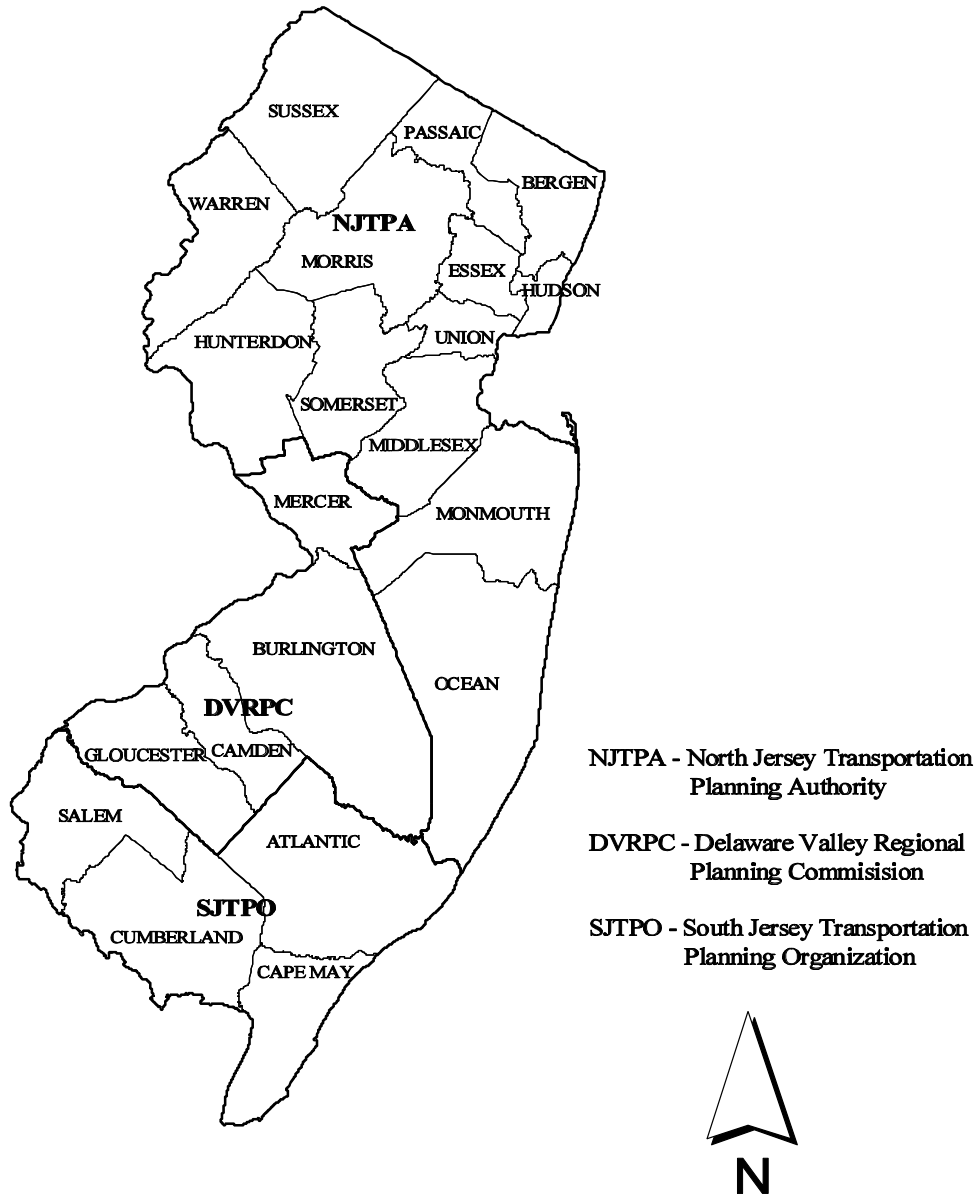
In New Jersey, there are three transportation planning organizations called Metropolitan Planning Organizations (MPOs). The geographic area for each MPO is shown in Figure 7. It should be noted that the transportation conformity budgets established herein apply to the full MPO areas of Figure 7, which may not coincide fully with the nonattainment areas depicted in Figure 6. Since New Jersey has two remaining but different attainment dates, due to different area classifications which in turn are based on the severity of the ozone concentrations recorded, the relevant attainment years are different for each transportation planning area. The attainment years are 2007 for the North Jersey Transportation Planning Authority (NJTPA) area and 2005 for the Delaware Valley Regional Planning Commission (DVRPC) area and the South Jersey Transportation Planning Organization (SJTPO) area. The control measures assumed in the creation of the transportation conformity budgets for 2005 and 2007 are listed in Table 4.

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<sup>16</sup>NJDEP, New Jersey SIP Revision for the Attainment and Maintenance of the Ozone and Carbon Monoxide NAAQS - Meeting the Requirements of the Regional NO<sub>x</sub> Cap Program and Transportation Conformity Budgets, December 10, 1999.

Figure 7: NJ Metropolitan Planning Organizations

# New Jersey Metropolitan Planning Organizations



#### **Table 4: Control Measures Included in Transportation Conformity Budgets**

Tier 1 Vehicle Standards  
National Low Emission Vehicle Standards  
Reformulated Gasoline  
Enhanced Vehicle Inspection and Maintenance (I/M)  
Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Standards

The first four measures above in Table 4 are consistent with the Department's previous Ozone Attainment Demonstration submittal. The USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program was added to meet the USEPA requirement<sup>17</sup> for additional emission reductions. The inclusion of this program in the transportation conformity budgets is consistent with USEPA guidance<sup>18</sup>.

The Department used the MOBILE5a-h model and an "off-model" adjustment to establish the budgets. The off-model adjustment addressed the benefits from the USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, which are not included in the MOBILE5a-h model. The emission benefits for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program were derived using data supplied by the USEPA.<sup>19</sup> The resulting estimates of motor vehicle emissions for the 2005 and 2007 attainment years are provided in Table 5. The transportation conformity budgets for each MPO are represented by the VOC and NO<sub>x</sub> emissions in Table 5 that include the benefits of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in the respective attainment years.

In its calculation of the emission benefits from the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, the State used grams per mile benefit factors from Tables 8 and 9 of the USEPA memorandum, and projected vehicle miles traveled (VMT) estimates provided by the MPOs. This approach provides the MPO's and the State with a consistent basis to calculate attainment year and out-year mobile vehicle emissions.

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<sup>17</sup>64 Fed. Reg. 70380, December 16, 1999.

<sup>18</sup>Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Attainment Demonstrations," from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division directors, Regions I-VI. November 3, 1999. Web site: <http://www.epa.gov/ome/transp/traqconf.ht>.

<sup>19</sup>Memorandum from Lydia Wegman and Merrylin Zaw-Mon to the Air Division Directors, Regions I-VI, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking." November 8, 1999, Web site: <http://www.epa.gov/ttn/scram>.

**Table 5: Transportation Conformity Budgets With the Tier 2 Motor Vehicle Standard / Low Motor Sulfur Gasoline Program and Motor Vehicle Emission Estimates without the program**

<b>Transportation Planning Area</b>	<b>Attainment Year</b>	<b>VOC Budget -in tons per day-</b>	<b>NO<sub>x</sub> Budget -in tons per day-</b>	<b>Control Mode</b>
North Jersey Transportation Planning Authority (NJTPA)	2007	82.38	196.95	w/o Tier2/Low Sulfur
		77.72*	170.89*	with Tier2/Low Sulfur
		4.66	26.06	Benefit
South Jersey Transportation Planning Organization (SJTPO)	2005	10.69	27.41	w/o Tier2/Low Sulfur
		10.19*	24.81*	with Tier2/Low Sulfur
		0.50	2.60	Benefit
Delaware Valley Regional Planning Commission (DVRPC)	2005	33.41	64.09	w/o Tier2/Low Sulfur
		32.40*	58.86*	with Tier2/Low Sulfur
		1.01	5.23	Benefit

\* represents the transportation conformity budget.

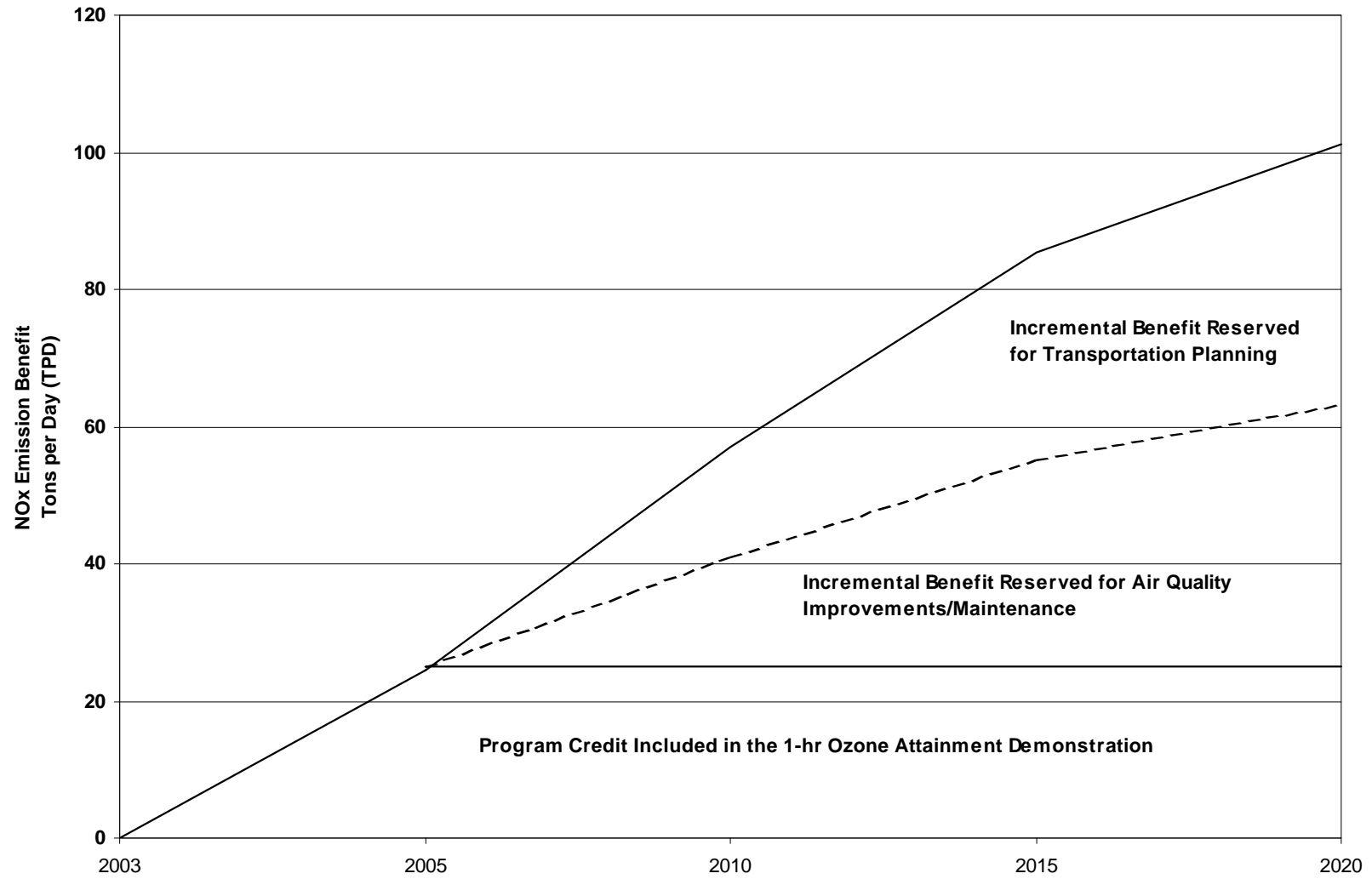
It should be noted that the continuing introduction of vehicles into use that will be subject to the new Tier 2 Motor Vehicle standards beyond the attainment years will result in a increasing emission benefit relative to the benefits depicted in Table 5. For purposes of the following discussion this is termed the incremental benefit<sup>20</sup> of Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program. This growth in emission benefit is illustrated in Figure 8. The trend of emission benefit in that Figure was derived by applying the per mile Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program emission benefits<sup>21</sup> to a hypothetical VMT growth scenario of 1.1% per year, starting with a statewide VMT equal to the sum of the respective MPO predictions for the 2005 / 2007 time frames. The 1.1% per year approximates the yearly rate of VMT growth in New Jersey from 1994 to 1998. The growth in emissions benefit from the Program is evident from the Figure. The incremental benefit, for this example, is obtained by subtracting the benefit in a given year beyond 2005 from the benefit in 2005. Also, indicated in the Figure are the portions of the Program benefit reserved for transportation planning and air quality purposes, assuming an even division (50%) of the incremental benefit. The lower portion of Figure 8 represents the benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in the earlier attainment years (in this example, 2005) that is used for attainment demonstration purposes.

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<sup>20</sup>The incremental benefit is the difference between the emission benefit of the Tier 2 Vehicle Standard/Low Sulfur Gasoline Program in a year beyond the attainment year and the emissions benefit of the Program in an attainment year.

<sup>21</sup>Memorandum from Lydia Wegman and Merrylin Zaw-Mon to the Air Division Directors, Regions I-VI, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking." November 8, 1999, Web site: <http://www.epa.gov/ttn/scram>.

**Figure 8: Illustration of NO<sub>x</sub> Emission Benefit From Tier 2 Motor Vehicle Standard & Low Sulfur Gasoline Programs**



Through the inter-agency consultation process, current planning data on these incremental benefits was gathered. The NJDEP compared the incremental benefits to the amount by which projected out-year emissions (with the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program). For VOC's, emissions this review indicates that the degree to which future projected emissions will be below budgets is unclear. However for NO<sub>x</sub>, it appears that projected emissions with the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program will be consistently below budgets. Further, the NJDEP has concluded that less than 50% of the incremental NO<sub>x</sub> emission benefit from the Program should be ample in the years beyond the attainment years for transportation planning purposes.

Therefore, the State is proposing to allocate 50% of the incremental NO<sub>x</sub> emission benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program for transportation planning purposes and to allocate 50% of the incremental NO<sub>x</sub> emission benefit for air quality-related purposes. This reserve for air quality purposes will allow for:

- (a) future assurance of attaining and maintaining the 1-hour ozone health standard
- (b) possible use as a contingency measure, and
- (c) future assistance with complying with the 8-hour ozone health standard, and
- (d) to create the option for the State to utilize some of the Program emission benefit<sup>22</sup> to offset refinery emission increases from the implementation of gasoline desulfurization projects related to the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

## **V. Control Measures**

For the New York-Northern New Jersey-Long Island and Philadelphia-Wilmington-Trenton nonattainment areas, the USEPA has proposed to determine that additional emission reductions beyond those already identified in the previous New Jersey Ozone Attainment Demonstration SIP submission are necessary for attainment.

As an initial matter, for areas such as those above that need additional measures, the USEPA is requiring each state to submit a commitment to adopt additional control measures to meet the level of reductions that the USEPA has identified as necessary for attainment. This commitment is provided in Part V herein.

Additionally, the USEPA is requiring each state to identify an initial list of potential control measures. From that list and / or from other measures that may arise that are not currently on the initial list, a set of measures would be selected, that when implemented, would be expected to provide the additional emission reductions to meet the level of reductions that the

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<sup>22</sup>Such a decision to utilize Program benefits for refinery offsets will await USEPA Guidance, planned for issuance early in 2000; per Section IV(C)3.c of the USEPA final rule: Control of Air Pollution from Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements, signed December 21, 1999.

USEPA has identified as necessary for attainment. States need not commit to adopt any specific measures on their initial list at this time, but if they do not do so, they must affirm that some combination of measures on their list has the potential to meet or exceed the USEPA - identified additional reductions.

New Jersey has been and will continue to be active in working with other states, including those in the Ozone Transport Commission (OTC) to identify potential measures to fill emission shortfalls. At a recent joint meeting on November 17, 1999 of the OTC's Stationary/Area Source and Mobile Source Committees a list of possible additional measures was presented. This list is reproduced in full as Table 6 with the exception of land use controls, which was removed because it is inconsistent with the USEPA's transportation conformity budget approval requirements<sup>23</sup>. Additional potential measures may also be identified in the future. Many of the items listed will, in all likelihood, not be utilized for this exercise. Also, some of the measures on the discussion list may not be appropriate for New Jersey.

**Table 6: Control Source Categories or Measures Listed in the Agenda for the November 17, 1999 Joint Meeting of the OTC's Stationary/Area Source and Mobile Source Committees**

**Mobile Sources**

Non-Road Engines/Equipment

- Marine engines (e.g., 2/4 - stroke recreational and commercial vessels, diesel controls)
- Adoption of California non-road large engine standards
- Locomotive engine standards
- Airports - cleaner aircraft (differential landing fees based on NO<sub>x</sub>)
  - airport emission budgets/"bubble"
  - cleaner ground support equipment

On-Road Engines/Equipment

- OTR/regional motor vehicle program
- On-board Selective Catalytic Reduction (SCR) for on-road diesels
- Clean bus pilot programs
- Enforcement of idling restrictions
- Extension of diesel testing to include NO<sub>x</sub> emissions
- Incentives for newer, cleaner models in the OTR
- Support of the EPA Heavy Duty Diesel Settlement Agreement

Prohibition on resale of trucks with defeat devices

Agreement extensions to rebuilds of pre-1994 trucks with defeat devices

**Table 6 (continued)**

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<sup>23</sup>64 Fed. Reg. 70380 (December 16, 1999).

## Fuels

- Gasoline (e.g., low sulfur/sulfur budget, MTBE phase-down, CA RFG II/III, OTR/regional fuel)
- Diesel (e.g., on-road and non-road: increased cetane, low sulfur, additives/reformulation to reduce NO<sub>x</sub>, OTR/regional fuel)

## **Stationary/Area Sources**

- Diesel Generators (e.g., SCR for stationary diesel engines)
- Clean distributed power generation
- Emission portfolio standards for electric generation
- System benefit charges
- Industrial boilers
- Institutional, Commercial, and Industrial Boiler Control (e.g., residual oil - Selective Catalytic Reduction)
- Internal Combustion (IC) engine controls (e.g., urea-based SCR retrofit)
- Encouragement of turnover to cleaner gas turbines
- Energy efficiency/air quality beneficial programs
- Energy efficient building codes resulting in quantifiable emission reductions
- State incentives for energy efficient appliances, equipment, and lighting resulting in quantifiable emission reductions
- Ultra-low NO<sub>x</sub> burners
- Cement kilns/plants
- Waste combustion
- Automobile refinishing
- Architectural and Industrial Maintenance (AIMs) coatings
- Aerosol paints
- Consumer Products
- Solvent Cleaning
- Improved gasoline dispensing containers
- Industrial adhesives
- Gas stations - pressure venting controls
- Metal coils/can coatings
- Metal furniture and appliances/parts coatings
- Low NO<sub>x</sub> water/space heaters - Commercial/Institutional boilers and residual oil
- Natural gas pipelines - blowdown controls
- Medium sized non-EGU facility controls (e.g., RACT redefinition)
- Portable/Emergency generators

## **Table 6 (continued)**

### **GENERAL**

- Teleshopping/Telelogistics - Improved transit information

The NJDEP has, also assembled available data on certain control measures. It has analyzed certain correlations between greenhouse gas (GHG) emissions and ozone precursors, i.e., NO<sub>x</sub> and VOC emissions. Such correlations imply that GHG-related measures may have ancillary NO<sub>x</sub> and / or VOC emission benefits. Therefore certain measures in the State's Climate Change Action Plan<sup>24</sup> and New Jersey's energy efficiency and renewable energy programs will be reviewed as to their potential ancillary NO<sub>x</sub> and/or VOC emission benefits, and for their conformance with established criteria for acceptable SIP measures. Further, based on the available information, at this time, New Jersey is considering inquiry into possible controls of gasoline dispensing containers, industrial adhesives, landfill controls beyond those assessed in the States revision of its 15 Percent Rate of Progress Plan,<sup>25</sup> and natural gas pipeline compressor station controls.

At a recent OTC meeting in Washington D.C. on January 27, 2000, attention was focused on a number of emission source areas and measures. These are presented below in Table 7.

### **Table 7: Potential Source Control Categories and Measures Discussed at the January 27, 2000 OTC Meeting**

- ancillary benefits from energy efficiency and renewable energy programs, including systems benefit charges, i.e., fees on customer electricity bills designed to fund such programs
  - electric generation performance standards
  - cleaner motor-vehicle fuels, including diesel fuel
  - consumer products
  - distributed diesel electric generators
  - industrial and commercial products and practices, including architectural and industrial maintenance coatings auto refinishing practices and solvent cleaning practices
  - non-road vehicles and equipment, including marine vessels, and engines
  - aircraft and airport equipment, and
  - State programs, e.g., incentives and procurements to promote energy efficiency, renewable energy, and clean electric power generation
- The consideration of source categories to control and measures is at a preliminary stage.

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<sup>24</sup>New Jersey Climate Change Action Plan, May 8, 1999.

<sup>25</sup>Revision to the NJ 15 Percent Rate of Progress Plan, February 8, 1999.

While the State will consider the above areas, it may add or delete potential categories or measures as information is gathered. Thus any of the items listed above in Tables 6 and 7 or discussed in the above text may or may not be one of the source categories or measures included in the SIP submission due to the USEPA by October, 2001.

To summarize, New Jersey is confident that a suite of appropriate measures from Table 6 and 7 and/or others to be identified, can meet the emission shortfall. However, it is premature for New Jersey to determine which specific set of measures it will target as those that would be expected to meet the USEPA - identified shortfalls or, in fact, the full set of measures that will be analyzed in depth.

## **VI. Commitments**

The following presents the New Jersey commitments directed toward achieving the additional USEPA - identified emission reductions.

### **A. Combined USEPA Requirements for Finding a Transportation Conformity Budget Adequate and for Attainment Demonstration Approval.**

In its recent Federal Register notice<sup>26</sup>, the USEPA presented state requirements for both finding a transportation budget adequate and for approving attainment demonstrations. The requirements for both approvals are combined and listed below. Thus the USEPA has proposed to approve New Jersey's Ozone Attainment Demonstration SIP and Transportation Conformity Budgets provided that New Jersey submits:

1. its adopted NO<sub>x</sub> SIP Call program as a SIP revision;
2. an enforceable commitment to adopt sufficient regional and/or intrastate measures to address the required level of additional emission reductions recently identified by the USEPA and to revise its Attainment Demonstration accordingly to reflect those measures prior to October, 2001;
3. a revised transportation conformity budget which reflects the additional emission reductions identified by the USEPA from the Tier 2 Motor Vehicle Standard / Low Sulfur program, by December 31, 2000;
4. an enforceable commitment to revise the New Jersey Attainment Demonstration, to include a recalculation of the transportation conformity budgets to reflect the additional emission reductions from any adopted mobile vehicle-related measures;
5. an enforceable commitment to revise the Attainment Demonstration - related transportation conformity budgets, within one year after the MOBILE6 model is released for SIP usage.
6. a list of possible additional control measures from which a suite of measures can be drawn that would be expected to meet the USEPA - identified emission reduction needs, and
7. an enforceable commitment to conduct and complete a mid-course review no later than December 31, 2003.

The State's actions and commitments to meet these requirements are provided in the

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<sup>26</sup>64 Fed. Reg. 70380, December 16, 1999.

following Section.

## B. New Jersey Actions and Commitments

The current and planned New Jersey actions to meet the conditions in the prior section are described below. The item numbers correspond to the numbers in the previous section.

### 1. NO<sub>x</sub> SIP Call

For covered sources, New Jersey's existing NO<sub>x</sub> Budget Program results in a NO<sub>x</sub> cap that is lower than that used by the USEPA in calculating the NO<sub>x</sub> Budget for its SIP Call on August 27, 1999<sup>27</sup>. Therefore New Jersey plans to use its NO<sub>x</sub> Cap program to meet the requirements of the USEPA NO<sub>x</sub> SIP call. This SIP revision was submitted to the USEPA on December 10, 1999. Also New Jersey proposed rule changes to its NO<sub>x</sub> Budget Program on August 2, 1999<sup>28</sup> to conform to certain USEPA procedural requirements regarding the federal trading program. These changes are anticipated to be adopted early in 2000, but, they do not affect the overall New Jersey NO<sub>x</sub> Cap/emission limitation number for covered sources that was used in the December 10, 1999 SIP submittal.

### 2. Commitment to Address the Emission Reduction Shortfall

New Jersey commits to address its fair share of the emission reduction shortfall. This effort will include working with other jurisdictions including those in the Ozone Transport Region (OTR) to adopt and submit, by October 31, 2001, additional necessary regional control measures in conjunction with those other jurisdictions, to offset the recent USEPA - identified emissions reduction requirements in Tables 2 and 3.

The State is further committed to adopt and submit, by October 31, 2001, intrastate measures for emission reductions in the event that regional rules or other regional agreements<sup>29</sup> do not provide for sufficient measures to provide New Jersey's fair share of the level of the recent USEPA - identified emission reductions.

The State agrees to revise its prior attainment demonstration SIP by October 31, 2001 to include the suite of OTR, other adopted regional, and/or intrastate measures that will be used to meet the recent USEPA - identified shortfalls, and to quantify the expected emission reduction from each such measure.

### 3. Transportation Conformity Budget - Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program

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<sup>27</sup>New Jersey Proposed SIP Revision for the Attainment and Maintenance of the Ozone and Carbon Monoxide National Ambient Air Quality Standards. August 27, 1999.

<sup>28</sup>New Jersey Register 31 N.J.R. 2100(a); August 2, 1999.

<sup>29</sup>For the purposes of this SIP revision, a regional agreement means a formalized agreement between at least two states in a nonattainment area, to implement the same or substantially equivalent control measure.

New Jersey has proposed to revise its transportation conformity budgets herein (Part IV) to reflect the benefits of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, well before the December 31, 2000 deadline.

4. Transportation Conformity Budget - New Mobile Measures

New Jersey commits to revise its Transportation conformity Budgets to include the effect of any new motor vehicle - related emission reduction measures that are utilized to meet New Jersey's fair share of the USEPA - identified emission reduction needs in Table 2.

5. Transportation Conformity Budget - MOBILE6

New Jersey commits to revise its transportation conformity budgets within one year of the date that the USEPA releases the motor vehicle emissions model MOBILE6 for SIP usage.

6. Additional Control Measures

Lists of possible control measures are provided in Part V of this SIP revision.

7. Mid-course Review

New Jersey commits to perform and complete a mid course review by no later than December 31, 2003.

Several of the above commitments replace commitments in the State's prior Phase II Ozone SIP submittal. The commitment here to a midcourse review in 2003 (Item 7) replaces the one for 2002 on pages 133 and 137 of the State's Ozone Attainment Demonstration SIP. The commitment here (Item 2) to address the USEPA - identified emission shortfall replaces the commitment on page 119 of the Ozone Attainment Demonstration SIP to assess certain control measures. The State's commitment in the Ozone Attainment Demonstration SIP (page 132) to a Rate of Progress Plan by the end of the year 2000 remains.

Regarding the midcourse review change, it should be noted that the original commitment to such a review in 2002 did have one advantage regarding the Philadelphia-Wilmington-Trenton area, in that it provided more time to observe monitored ozone reductions from added measures - if deemed needed- prior to the attainment year of 2005. This time factor can be important because the 1-hour design value - the regulatory criterion - is a three-year measure, specifically the fourth highest ozone measurement at a given monitoring site over a 3-year period. However USEPA Guidance for such mid-course reviews, although not yet finalized, may call for additional photochemical modeling analyses as part of the review, which as a practical matter the State believes cannot be completed by 2002. Therefore the State believes that it may not be able to conclude the formal midcourse review until 2003. In light of these conflicting circumstances the State will carefully track ozone concentrations in the area prior to 2003, while continuing to work toward and anticipate a significant ozone reduction from Regional NO<sub>x</sub> reduction measures through the NO<sub>x</sub> SIP call and/or Section 126 petitions, and consider the need for any further appropriate action.

## VII. Conclusions

This SIP revision commits the State to achieve its fair share of the level of additional emission reductions identified by the USEPA as necessary to more conclusively predict attainment of the 1-hour ozone health standard. It also provides a revised transportation conformity budget incorporating the anticipated benefits from the USEPA Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in 2005 and 2007. Additionally, regarding transportation conformity budgets, the NJDEP is proposing to reserve 50% of the incremental<sup>30</sup> benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in the years beyond the attainment years for air-quality purposes. Further, it contains a series of commitments designed to move the State progressively towards attainment with the one-hour averaged ozone health standard and to update the State's transportation conformity budgets accordingly.

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<sup>30</sup>The incremental benefit is the difference between the emission benefit of the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program in a year beyond the attainment year and the emission benefit of the Program in an attainment year.

**The State of New Jersey  
Department of Environmental**

**Proposed 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**

**Appendix I: Post-Processor Air Quality (PPAQ)  
Driver File and Output Files,  
Traffic Data Input Files,  
Spreadsheets for Emission Calculations and  
Tier 2 Motor Vehicle Standards / Low Sulfur  
Gasoline  
Emission Benefit**

**February 4, 2000**

## **Appendix I Table of Contents**

- 1. Highway Mobile Sources**
  - Mobile5a\_h Model Input Parameters**
  - Figure 1: Metropolitan Planning Organizations in New Jersey**
  - a. Modeling the New Jersey Inspection and Maintenance Program**
  - b. The Post-Processor for Air Quality**
  - c. DVRPC Modeling Process**

### **Attachment A: NJTPA Region**

- 1.) PPAQ Driver Files, for the centralized and decentralized motor vehicle inspection and maintenance program.**
- 2.) Traffic Data Input Files (Available in Electronic Format Only)**
- 3.) PPAQ Database File Outputs (Available in Electronic Format Only)**
- 4.) Tier 2 Benefit Spreadsheet**
- 5.) Emission Calculation Spreadsheet**

### **Attachment B: SJTPO Region**

- 1.) PPAQ Driver Files (Available in Electronic Format Only)**
- 2.) Traffic Data Input Files (Available in Electronic Format Only)**
- 3.) PPAQ Database File Outputs (Available in Electronic Format Only)**
- 4.) Tier 2 Benefit Spreadsheet**
- 5.) Emission Calculation Spreadsheet**

### **Attachment C: DVRPC Region**

- 1.) Mobile Input Files (Available in Electronic Format Only)**
- 2.) Traffic Data Input Files (Available in Electronic Format Only)**
- 3.) Inventory Output Files (Available in Electronic Format Only)**
- 4.) Tier 2 Benefit and Emission Calculation Spreadsheet**

## **1. Highway Mobile Sources**

The highway mobile source emissions for 2005 and 2007 are an estimate of VOC and NO<sub>x</sub> tailpipe emissions, and VOC evaporative emissions, from vehicles operating on public roadways. In general, the 2005 and 2007 emissions are calculated by multiplying an emission factor times an activity level. In the case of the highway mobile source portion of the emission inventory, the activity level is daily vehicle miles traveled (DVMT). The emission factors are calculated using a USEPA computer model, Mobile 5a\_h.

The DVMT used to estimate the 2005 and 2007 highway emissions presented here is based on travel demand models (TDMs) in use by the three (3) Metropolitan Planning Organizations (MPOs) in the State. The three MPOs with jurisdiction in New Jersey are the North Jersey Transportation Planning Authority (NJTPA), the Delaware Valley Regional Planning Commission (DVRPC) and the South Jersey Transportation Planning Organization (SJTPO). Figure 1 presents a map showing the counties included in each of the three MPOs.

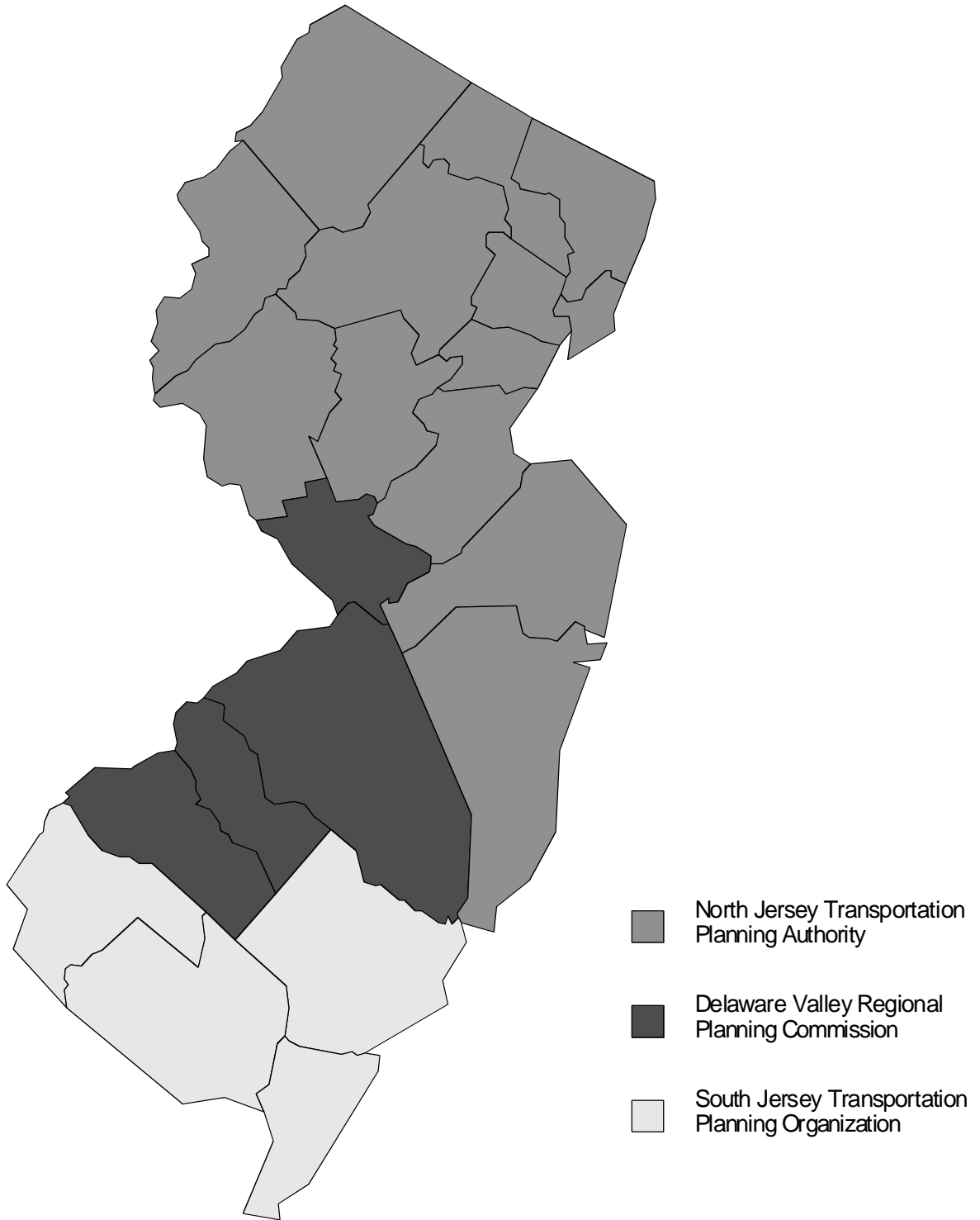
In general, the TDMs use demographic data, such as population, employment, housing densities, and shopping patterns to estimate the demand for travel in the modeled area. This travel demand is then distributed throughout the available roadways and transit routes, referred to as links. An algorithm which takes into account factors such as transit fares, tolls, traffic volume, and time of day is used to estimate how many people travel from one point to another on any given link. The number of vehicles traveling on each link is then used to estimate the speed of travel and the total number of vehicle miles traveled (VMT) in a day. After this process, any VMT which is not accounted for in the model, such as increases to account for local roadways, is added to the model output to yield the final DVMT values. The resulting spread sheets contain the DVMT used by county for the MPO regions.

The specific method used to convert this DVMT into emission varies by MPO. The NJTPA and the SJTPO both use the Post-Processor for Air Quality (PPAQ) computer model to estimate emissions. The DVRPC uses their own, specific computer model to generate emissions information. However, all three MPOs use Mobile 5a\_h in the same manner.

### **Mobile5a\_h Model Input Parameters**

The Mobile 5a\_h model simulations for 2005 and 2007 included the effects of the following federal programs: Tier 1 program, the National Low Emission Vehicle program (NLEV) and the Reformulated Fuel program (RFG), and the New Jersey Motor Vehicle Inspection and Maintenance Program. The Mobile5a\_h model can simulate the full effects of the RFG I program, and only part of the RFG II program. The effects of the Tier 2 Motor Vehicle Standards and the Low Sulfur Gasoline Emission Benefit are calculated off model, and the spreadsheets used are also provided in this appendix.

**Figure 1: Metropolitan Planning Organizations in New Jersey**



a. *Modeling the New Jersey Inspection and Maintenance Program*

A two-step process is required to estimate the impact of the vehicle inspection program on emissions from highway mobile sources in New Jersey. The first step estimates the emissions from all vehicles in the State as if they were inspected at a centralized, test-only inspection facility. The second step estimates the emissions from all vehicles in the state as if they were inspected at a decentralized, test-and-repair facility. The composite emissions from these two steps are then combined together assuming that 70% of the vehicle fleet is inspected at a centralized facility and 30% are inspected at a decentralized facility. The New Jersey decentralized test was estimated to be 80% as effective as a centralized test, versus a 50% effectiveness accounted for in the Mobile 5a\_h model. To account for this, 3/5 times the decentralized emissions minus the centralized emissions was subtracted from the decentralized emissions before multiplying by the 30% use factor for the decentralized portion. The general input parameters that represent the New Jersey inspection and maintenance program in 2005 and 2007 are as follows:

**General Input Parameters for New Jersey's Inspection & Maintenance Program in 2005 and 2007:**

- idle testing for pre-1981 vehicles
- acceleration simulation mode (ASM) exhaust testing with final emission cutpoints for HC, CO, and NOx, for model year 1981 and newer vehicles
- pressure testing (81 + newer vehicles including gas cap test)
- purge testing (81 + newer vehicles)
- anti-tampering program (ATP) testing, same as 1999:
  - catalytic converter check
  - fuel inlet restricter check
  - gas cap integrity check
- gas cap testing for pre 1981 vehicles
- technician training
- biennial testing cycle
- 98% compliance rate (effectiveness of the inspection and maintenance program in reducing HC, CO, and NOx emissions)

The individual input driver files used for each MPO are contained in this appendix.

*b. The Post-Processor for Air Quality*

Both the NJTPA and the SJTPO use a computer model call the Post-Processor for Air Quality (PPAQ) to estimate emissions from highway mobile sources. In general, this model uses a “traffic file,” generated by the TDM to calculate emissions. The traffic file contains DVMT estimates for three (3) roadway types for four (4) time periods over 24 hours for each county in the MPO’s jurisdiction. There is also a time period for the 24-hour average, but this is not used for SIP purposes. The three roadway types are freeways, arterials and locals. The four time periods used are overnight (7 p.m. to 6 a.m. the following day), morning rush hour (6 to 9 a.m.), mid-day (9 a.m. to 4 p.m.), and evening rush hour (4 p.m. to 7 p.m.). The traffic files used to generate the 2007 highway emissions for the NJTPA and the SJTPO are presented in this appendix and are available only in electronic copies.

The second type of input file used by the PPAQ model is referred to as a “driver” file. This driver file contains information about which traffic file to use, the temperature data that should be used, the output files to generate and the specific Mobile 5a\_h model input files. The driver files used to develop the 2007 and 2005 highway emissions for the NJTPA and the SJTPO are contained in this appendix and are available only in electronic copies.

The PPAQ model first uses the driver file and the traffic file to generate a Mobile 5a\_h input file. The program then runs Mobile 5a\_h using the generated input file to create an output file. The model then uses the Mobile 5a\_h input file, the Mobile 5a\_h output file and the driver file to calculate the emissions. The calculated emissions are stored in a dBASE format file for future use. Copies of the driver files containing the Mobile 5a\_h input files used the generate the 2007 and 2005 highway emissions for the NJTPA and the SJTPO are provided in this appendix. Also, the spreadsheets with the results of the modeling and the off-model calculations to account for New Jersey’s inspection and maintenance program are provided.

*c. DVRPC Modeling Process*

The DVRPC uses a slightly different process to calculate emissions. First, the TDM is used to generate a file which contains the relevant DVMT and speed data, referred to as a card file. DVRPC’s model uses this card file, along with several other files, to generate the DVMT file. The other file mentioned here account for seasonal adjustment, off-model DVMT, and growth for non-modeled years. Three Mobile 5a\_h input files are then set up and run. The three input files are for each of the three roadway types used in the TDM: freeways, arterials, and locals. The DVRPC modeling procedure generates Mobile 5a\_h emission factors for speeds between 3 and 55 miles per hour in one mile per hour increments for use by the model. The emission factors from the three Mobile 5a\_h model runs are then merged into an emission factor lookup table file for use by the DVRPC model. The Mobile 5a\_h input files used to generate the 2005 highway emissions, and the spreadsheets with the results are provided in this appendix.

**Appendix I**  
**Attachment A: NJTPA**

## NJTPA 2007

This workbook was developed to assist in the establishment of the transportation conformity budget for the NJTPA area. The worksheets contained in this workbook do not include the benefits of the Federal Tier 2/Sulfur program.

This workbook was developed by Chris N. Salmi, NJDEP, December 16, 1999.

<u>Worksheet</u>	<u>Description</u>
Documentation	This worksheet.
County List	Contains a listing of the counties, area number, and MPO. <<Hidden>>
Constants	Contains the constants used in the calculations.
njei07c	Contains the output (data base file) from PPAQ for the centralized enhanced I/M program. <<Hidden>>
njei07d	Contains the output (data base file) from PPAQ for the decentralized enhanced I/M program. <<Hidden>>
VMT	Contains the output of VMT by vehicle class and county.
Cent -Em by Veh Class by County	Contains a summary of the emissions for the centralized program by vehicle class and county.
Decent -Em by Veh Class by Co	Contains a summary of the emissions for the decentralized program by vehicle class and county.
VOC Em by Veh Clas by County	Contains a summary of the VOC emissions after application of the enhanced I/M program adjustments.
NOx Em by Veh Clas by Count	Contains a summary of the NOx emissions after application of the enhanced I/M program adjustments.

### Enhanced I/M Adjustments

- Centralized / Decentralized split
- The decentralized program is 80% effective as the centralized program.

## Constants

Fraction Centralized	0.7
Fraction Decentralized	0.3

### Conversion Factor

kg->lbs	2.2046
lbs->tons	0.0005

Source: Slade, David, Meteorology and Atomic Energy, 1968, U.S. Atomic Energy Commission

## NJTPA 2007 VMT

County	Area	VMT1	VMT2	VMT3	VMT4	VMT5	VMT6	VMT7	VMT8	VMTTOTAL
Bergen	3	16,260,791	1,690,790	985,730	227,778	423,797	127,415	419,092	203,383	20,338,776
Essex	13	10,004,498	1,159,703	576,302	158,555	266,420	73,506	295,690	126,616	12,661,290
Hudson	17	5,029,432	432,263	303,112	153,901	121,139	38,709	275,227	64,180	6,417,963
Hunterdon	19	3,252,756	532,765	372,329	131,491	150,805	49,475	236,355	47,739	4,773,715
Middlesex	23	13,343,352	1,624,482	868,792	397,902	387,004	109,077	729,844	176,370	17,636,823
Monmouth	25	12,687,491	2,640,285	1,262,180	270,535	593,001	160,373	551,979	183,497	18,349,341
Morris	27	13,899,992	1,232,934	864,758	306,399	347,381	111,943	557,182	174,954	17,495,543
Ocean	29	9,769,878	1,755,268	1,227,463	238,661	493,823	160,135	429,086	142,161	14,216,475
Passaic	31	7,299,997	726,826	438,256	136,055	186,074	57,808	246,161	91,833	9,183,010
Somerset	35	7,565,330	577,469	402,938	161,721	162,541	52,777	292,459	93,081	9,308,316
Sussex	37	3,109,144	598,765	418,365	115,468	168,589	55,139	206,551	47,188	4,719,209
Union	39	6,973,112	814,548	409,761	133,555	188,039	55,016	244,126	89,074	8,907,231
Warren	41	3,527,285	396,774	278,174	245,804	112,697	35,869	442,645	50,900	5,090,148
		112,723,058	14,182,872	8,408,160	2,677,825	3,601,310	1,087,242	4,926,397	1,490,976	149,097,840

## NJTPA 2007 VOC Emissions

Units = kg

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	6,562.80	784.97	721.50	376.82	126.42	53.88	563.81	785.08	9,975.27
Essex	13	3,896.38	519.17	418.33	254.21	76.72	30.85	381.18	485.43	6,062.27
Hudson	17	2,061.79	215.13	228.29	237.42	38.84	17.08	351.45	246.41	3,396.41
Hunterdon	19	1,158.45	232.85	247.73	159.28	42.97	19.05	261.82	161.77	2,283.92
Middlesex	23	5,245.92	765.75	653.71	543.22	116.89	47.07	796.06	688.66	8,857.28
Monmouth	25	4,790.71	1,177.62	909.61	441.99	168.20	65.10	709.11	707.80	8,970.14
Morris	27	5,405.95	574.37	609.15	441.14	98.72	43.12	649.88	674.99	8,497.32
Ocean	29	3,920.39	818.63	866.98	372.15	144.39	63.90	544.29	548.79	7,279.53
Passaic	31	3,066.51	351.56	333.11	226.85	58.05	25.27	333.18	358.41	4,752.94
Somerset	35	3,014.49	272.77	289.13	237.68	47.05	21.02	349.95	361.54	4,593.63
Sussex	37	1,326.56	298.92	314.64	207.75	54.71	24.51	315.72	179.86	2,722.67
Union	39	2,842.68	382.35	310.58	178.44	56.29	23.55	260.61	350.13	4,404.63
Warren	41	1,370.87	185.73	199.01	353.07	33.84	14.72	599.32	178.77	2,935.33
<b>Total</b>		<b>44,663.50</b>	<b>6,579.83</b>	<b>6,101.78</b>	<b>4,030.02</b>	<b>1,063.09</b>	<b>449.12</b>	<b>6,116.38</b>	<b>5,727.64</b>	<b>74,731.35</b>

Units = lbs

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	14,468	1,731	1,591	831	279	119	1,243	1,731	21,991
Essex	13	8,590	1,145	922	560	169	68	840	1,070	13,365
Hudson	17	4,545	474	503	523	86	38	775	543	7,488
Hunterdon	19	2,554	513	546	351	95	42	577	357	5,035
Middlesex	23	11,565	1,688	1,441	1,198	258	104	1,755	1,518	19,527
Monmouth	25	10,562	2,596	2,005	974	371	144	1,563	1,560	19,776
Morris	27	11,918	1,266	1,343	973	218	95	1,433	1,488	18,733
Ocean	29	8,643	1,805	1,911	820	318	141	1,200	1,210	16,048
Passaic	31	6,760	775	734	500	128	56	735	790	10,478
Somerset	35	6,646	601	637	524	104	46	771	797	10,127
Sussex	37	2,925	659	694	458	121	54	696	397	6,002
Union	39	6,267	843	685	393	124	52	575	772	9,710
Warren	41	3,022	409	439	778	75	32	1,321	394	6,471
<b>Total</b>		<b>98,465</b>	<b>14,506</b>	<b>13,452</b>	<b>8,885</b>	<b>2,344</b>	<b>990</b>	<b>13,484</b>	<b>12,627</b>	<b>164,753</b>

Units = tons

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	7.23	0.87	0.80	0.42	0.14	0.06	0.62	0.87	11.00
Essex	13	4.29	0.57	0.46	0.28	0.08	0.03	0.42	0.54	6.68
Hudson	17	2.27	0.24	0.25	0.26	0.04	0.02	0.39	0.27	3.74
Hunterdon	19	1.28	0.26	0.27	0.18	0.05	0.02	0.29	0.18	2.52
Middlesex	23	5.78	0.84	0.72	0.60	0.13	0.05	0.88	0.76	9.76
Monmouth	25	5.28	1.30	1.00	0.49	0.19	0.07	0.78	0.78	9.89
Morris	27	5.96	0.63	0.67	0.49	0.11	0.05	0.72	0.74	9.37
Ocean	29	4.32	0.90	0.96	0.41	0.16	0.07	0.60	0.60	8.02
Passaic	31	3.38	0.39	0.37	0.25	0.06	0.03	0.37	0.40	5.24
Somerset	35	3.32	0.30	0.32	0.26	0.05	0.02	0.39	0.40	5.06
Sussex	37	1.46	0.33	0.35	0.23	0.06	0.03	0.35	0.20	3.00
Union	39	3.13	0.42	0.34	0.20	0.06	0.03	0.29	0.39	4.86
Warren	41	1.51	0.20	0.22	0.39	0.04	0.02	0.66	0.20	3.24
<b>Total</b>		<b>49.23</b>	<b>7.25</b>	<b>6.73</b>	<b>4.44</b>	<b>1.17</b>	<b>0.50</b>	<b>6.74</b>	<b>6.31</b>	<b>82.38</b>

## NJTPA 2007 NOx Emissions

Units = Kg

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	13,307.72	1,584.56	1,394.81	1,052.47	458.27	147.67	3,120.58	196.40	21,262.48
Essex	13	8,289.57	1,108.80	818.47	747.61	292.85	85.14	2,255.32	125.44	13,723.20
Hudson	17	3,940.28	374.36	415.31	722.42	124.13	43.63	2,015.24	58.79	7,694.16
Hunterdon	19	2,758.24	461.14	509.00	661.67	152.59	55.31	2,226.24	51.88	6,876.07
Middlesex	23	11,329.07	1,564.08	1,214.65	2,029.95	419.50	124.02	6,737.61	180.63	23,599.52
Monmouth	25	10,680.31	2,556.54	1,785.14	1,267.57	658.86	186.80	4,410.04	186.44	21,731.71
Morris	27	11,797.16	1,183.39	1,312.02	1,519.59	403.43	143.85	4,900.60	179.61	21,439.65
Ocean	29	7,763.05	1,552.26	1,715.54	1,123.98	510.87	181.76	3,207.22	132.83	16,187.50
Passaic	31	5,817.52	662.43	610.68	631.66	196.81	66.21	1,843.13	85.05	9,913.49
Somerset	35	6,397.63	558.63	616.33	797.80	189.66	67.78	2,615.62	94.94	11,338.39
Sussex	37	2,321.83	490.90	542.22	496.97	158.43	57.04	1,319.70	40.35	5,427.44
Union	39	5,944.53	822.40	600.94	687.97	217.48	67.19	2,316.40	91.57	10,748.48
Warren	41	3,142.46	375.80	416.67	1,129.34	131.94	46.39	3,431.20	56.61	8,730.42
<b>Total</b>		<b>93,489.38</b>	<b>13,295.29</b>	<b>11,951.79</b>	<b>12,869.00</b>	<b>3,914.82</b>	<b>1,272.79</b>	<b>40,398.90</b>	<b>1,480.54</b>	<b>178,672.51</b>

Units = lbs

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	29,338	3,493	3,075	2,320	1,010	326	6,880	433	46,875
Essex	13	18,275	2,444	1,804	1,648	646	188	4,972	277	30,254
Hudson	17	8,687	825	916	1,593	274	96	4,443	130	16,963
Hunterdon	19	6,081	1,017	1,122	1,459	336	122	4,908	114	15,159
Middlesex	23	24,976	3,448	2,678	4,475	925	273	14,854	398	52,027
Monmouth	25	23,546	5,636	3,936	2,794	1,453	412	9,722	411	47,910
Morris	27	26,008	2,609	2,892	3,350	889	317	10,804	396	47,266
Ocean	29	17,114	3,422	3,782	2,478	1,126	401	7,071	293	35,687
Passaic	31	12,825	1,460	1,346	1,393	434	146	4,063	188	21,855
Somerset	35	14,104	1,232	1,359	1,759	418	149	5,766	209	24,997
Sussex	37	5,119	1,082	1,195	1,096	349	126	2,909	89	11,965
Union	39	13,105	1,813	1,325	1,517	479	148	5,107	202	23,696
Warren	41	6,928	828	919	2,490	291	102	7,564	125	19,247
<b>Total</b>		<b>206,107</b>	<b>29,311</b>	<b>26,349</b>	<b>28,371</b>	<b>8,631</b>	<b>2,806</b>	<b>89,063</b>	<b>3,264</b>	<b>393,901</b>

Units = tons

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	14.67	1.75	1.54	1.16	0.51	0.16	3.44	0.22	23.44
Essex	13	9.14	1.22	0.90	0.82	0.32	0.09	2.49	0.14	15.13
Hudson	17	4.34	0.41	0.46	0.80	0.14	0.05	2.22	0.06	8.48
Hunterdon	19	3.04	0.51	0.56	0.73	0.17	0.06	2.45	0.06	7.58
Middlesex	23	12.49	1.72	1.34	2.24	0.46	0.14	7.43	0.20	26.01
Monmouth	25	11.77	2.82	1.97	1.40	0.73	0.21	4.86	0.21	23.95
Morris	27	13.00	1.30	1.45	1.68	0.44	0.16	5.40	0.20	23.63
Ocean	29	8.56	1.71	1.89	1.24	0.56	0.20	3.54	0.15	17.84
Passaic	31	6.41	0.73	0.67	0.70	0.22	0.07	2.03	0.09	10.93
Somerset	35	7.05	0.62	0.68	0.88	0.21	0.07	2.88	0.10	12.50
Sussex	37	2.56	0.54	0.60	0.55	0.17	0.06	1.45	0.04	5.98
Union	39	6.55	0.91	0.66	0.76	0.24	0.07	2.55	0.10	11.85
Warren	41	3.46	0.41	0.46	1.24	0.15	0.05	3.78	0.06	9.62
<b>Total</b>		<b>103.05</b>	<b>14.66</b>	<b>13.17</b>	<b>14.19</b>	<b>4.32</b>	<b>1.40</b>	<b>44.53</b>	<b>1.63</b>	<b>196.95</b>

**Appendix I**  
**Attachment B: SJTPO**

## SJTPO 2005

This workbook was developed to assist in the establishment of the transportation conformity budget for the SJTPO area. The worksheets contained in this workbook do not include the benefits of the Federal Tier 2/Sulfur program.

This workbook was developed by Chris N. Salmi, NJDEP, December 16, 1999.

<u>Worksheet</u>	<u>Description</u>
Documentation	This worksheet.
County List	Contains a listing of the counties, area number, and MPO. <<Hidden>>
Constants	Contains the constants used in the calculations.
sjei05c	Contains the output (data base file) from PPAQ for the centralized enhanced I/M program. <<Hidden>>
sjei05d	Contains the output (data base file) from PPAQ for the decentralized enhanced I/M program. <<Hidden>>
VMT	Contains the output of VMT by vehicle class and county.
Cent -Em by Veh Class by County	Contains a summary of the emissions for the centralized program by vehicle class and county. <<Hidden>>
Decent -Em by Veh Class by Co	Contains a summary of the emissions for the decentralized program by vehicle class and county. <<Hidden>>
VOC Em by Veh Clas by County	Contains a summary of the VOC emissions after application of the enhanced I/M program adjustments.
NOx Em by Veh Clas by Count	Contains a summary of the NOx emissions after application of the enhanced I/M program adjustments.

### Enhanced I/M Adjustments

- Centralized / Decentralized split
- The decentralized program is 80% effective as the centralized program.

## Constants

Fraction Centralized	0.7
Fraction Decentralized	0.3

### Conversion Factor

kg->lbs	2.2046
lbs->tons	0.0005

Source: Slade, David, Meteorology and Atomic Energy, 1968, U.S. Atomic Energy Commission

## SJTPO 2005 VMT

County	Area	VMT1	VMT2	VMT3	VMT4	VMT5	VMT6	VMT7	VMT8	VMTTOTAL
Atlantic	1	8,357,736	535,345	375,236	124,082	150,525	50,326	222,697	99,144	9,915,091
Cape May	9	3,429,914	311,327	217,822	47,263	87,726	28,673	86,727	42,519	4,251,971
Cumberland	11	3,418,158	338,164	236,509	91,218	95,211	30,314	164,107	44,175	4,417,856
Salem	33	2,541,045	204,841	143,363	126,155	57,904	19,108	227,188	33,528	3,353,132
		17,746,853	1,389,677	972,930	388,718	391,366	128,421	700,719	219,366	21,938,050

## SJTPO 2005 VOC Emissions

Units = kg

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	3,013.36	234.12	248.92	177.97	40.94	19.28	282.69	313.83	4,331.11
Cape May	9	1,141.38	125.62	132.70	61.56	21.45	9.87	100.04	130.80	1,723.42
Cumberland	11	1,279.82	156.67	165.73	135.81	27.68	12.44	219.39	139.68	2,137.22
Salem	33	814.50	81.16	85.24	160.49	13.20	6.18	236.91	110.98	1,508.66
Total		6,249.06	597.57	632.59	535.83	103.27	47.77	839.03	695.29	9,700.41

Units = lbs

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	6,643	516	549	392	90	43	623	692	9,548
Cape May	9	2,516	277	293	136	47	22	221	288	3,799
Cumberland	11	2,821	345	365	299	61	27	484	308	4,712
Salem	33	1,796	179	188	354	29	14	522	245	3,326
Total		13,777	1,317	1,395	1,181	228	105	1,850	1,533	21,386

Units = tons

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Atlantic	1	3.32	0.26	0.27	0.20	0.05	0.02	0.31	0.35	4.77
Cape May	9	1.26	0.14	0.15	0.07	0.02	0.01	0.11	0.14	1.90
Cumberland	11	1.41	0.17	0.18	0.15	0.03	0.01	0.24	0.15	2.36
Salem	33	0.90	0.09	0.09	0.18	0.01	0.01	0.26	0.12	1.66
Total		6.89	0.66	0.70	0.59	0.11	0.05	0.92	0.77	10.69

## SJTPO 2005 NOx Emissions

Units = Kg

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	6,898.36	473.83	514.95	586.01	148.53	55.25	1,570.67	102.59	10,350.19
Cape May	9	2,750.07	273.14	296.96	227.99	86.43	31.41	597.10	43.66	4,306.75
Cumberland	11	2,768.71	292.32	318.37	418.87	90.77	32.21	1,094.99	44.13	5,060.36
Salem	33	2,192.59	195.08	212.37	641.46	62.57	23.03	1,788.71	36.73	5,152.53
Total		14,609.72	1,234.35	1,342.65	1,874.33	388.30	141.90	5,051.47	227.11	24,869.84

Units = lbs

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	15,208	1,045	1,135	1,292	327	122	3,463	226	22,818
Cape May	9	6,063	602	655	503	191	69	1,316	96	9,495
Cumberland	11	6,104	644	702	923	200	71	2,414	97	11,156
Salem	33	4,834	430	468	1,414	138	51	3,943	81	11,359
Total		32,209	2,721	2,960	4,132	856	313	11,136	501	54,828

Units = tons

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Atlantic	1	7.60	0.52	0.57	0.65	0.16	0.06	1.73	0.11	11.41
Cape May	9	3.03	0.30	0.33	0.25	0.10	0.03	0.66	0.05	4.75
Cumberland	11	3.05	0.32	0.35	0.46	0.10	0.04	1.21	0.05	5.58
Salem	33	2.42	0.22	0.23	0.71	0.07	0.03	1.97	0.04	5.68
Total		16.10	1.36	1.48	2.07	0.43	0.16	5.57	0.25	27.41
									0.14	16.01

**Appendix I**  
**Attachment C: DVRPC**

## **DVRPC 2005 Tier 2/Sulfur Program Benefit Estimation and Resulting Transportation Conformity Budget**

This workbook was developed to establish the transportation conformity budget for the New Jersey counties in the DVRPC area. It includes the benefits from the federal Tier 2/Sulfur program per USEPA guidance.

This workbook was developed by Chris N. Salmi, NJDEP, December 12, 1999.

<u>Worksheet</u>	<u>Description</u>
Documentation	This worksheet.
Constants	Contains the constants used in the calculations
Emissions	Contains the base 2005 emissions, the Tier 2/Sulfur adjustment using Tables 8&9, and the resulting budget.
Base VMT	Contains the breakdown of VMT by county and vehicle class.
EPA T2 Credits	Contains the EPA Tier 2/Sulfur credits.
T2 Adj by Veh Class	Contains a calculation of the benefits of Tier 2/Sulfur by vehicle class (Table 8&9) method.
Comparison of EPA Methods	Contains a comparison of the Table 8&9 methods to the Tables 1-5 method.

### Enhanced I/M Adjustments

- Centralized / Decentralized split (0.7/0.3)
- The decentralized program is 80% effective as the centralized program.

## Constants

### Conversion Factor

kg->lbs	2.2046
lbs->tons	0.0005

Source: Slade, David, Meteorology and Atomic Energy, 1968, U.S. Atomic Energy Commission

## Emission Estimates

Base	VOC (kg)	NOx (kg)	VOC (lbs)	NOx (lbs)	VOC (tons)	NOx (tons)
Burlington	9,106.6	17,918.6	20,076	39,503	10.04	19.75
Camden	8,874.2	16,183.0	19,564	35,677	9.78	17.84
Gloucester	5,344.6	10,630.7	11,783	23,436	5.89	11.72
Mercer	6,980.3	13,411.9	15,389	29,568	7.69	14.78
Total	30,305.7	58,144.2	66,812	128,185	33.41	64.09

### T2 Adjustment (Using Tables 8&9)

Burlington	281	1,467	620	3,235	0.31	1.62
Camden	255	1,328	561	2,928	0.28	1.46
Gloucester	168	873	369	1,926	0.18	0.96
Mercer	207	1,080	456	2,380	0.23	1.19
Total	910	4,749	2,007	10,469	1.00	5.23

### Revised Budget

Burlington	8,826	16,451	19,457	36,268	9.73	18.13
Camden	8,620	14,855	19,003	32,749	9.50	16.37
Gloucester	5,177	9,757	11,413	21,511	5.71	10.76
Mercer	6,773	12,332	14,932	27,188	7.47	13.59
Total	29,396	53,396	64,805	117,716	32.40	58.86

## VMT Estimates

<u>VMT</u>									
County	Burlington	Camden	Gloucester	Mercer	Total				
Freeway	3,842,600	4,067,400	3,011,700	3,865,900	14,787,600				
Arterial	6,859,000	5,656,900	3,464,500	4,066,000	20,046,400				
Local	3,212,900	2,871,800	1,811,300	2,311,400	10,207,400				
<b>Total</b>	<b>13,914,500</b>	<b>12,596,100</b>	<b>8,287,500</b>	<b>10,243,300</b>	<b>45,041,400</b>				
<u>VMT Mix</u>									
	LDGV	LDGT1	LDGT2	HDTV	LDDV	LDDT	HDDV	MC	Total
Freeway	0.779	0.089	0.042	0.022	0.003	0.003	0.059	0.003	1.000
Arterial	0.793	0.080	0.047	0.020	0.003	0.051	0.003	0.003	1.000
Local	0.819	0.084	0.049	0.007	0.003	0.032	0.003	0.003	1.000
County									
<b>Burlington</b>									
Freeway	2,993,385	341,991	161,389	84,537	11,528	11,528	226,713	11,528	3,842,600
Arterial	5,439,187	548,720	322,373	137,180	20,577	349,809	20,577	20,577	6,859,000
Local	2,631,365	269,884	157,432	22,490	9,639	102,813	9,639	9,639	3,212,900
<b>Total</b>	<b>11,063,938</b>	<b>1,160,595</b>	<b>641,194</b>	<b>244,208</b>	<b>41,744</b>	<b>464,150</b>	<b>256,929</b>	<b>41,744</b>	<b>13,914,500</b>
<b>Camden</b>									
Freeway	3,168,505	361,999	170,831	89,483	12,202	12,202	239,977	12,202	4,067,400
Arterial	4,485,922	452,552	265,874	113,138	16,971	288,502	16,971	16,971	5,656,900
Local	2,352,004	241,231	140,718	20,103	8,615	91,898	8,615	8,615	2,871,800
<b>Total</b>	<b>10,006,431</b>	<b>1,055,782</b>	<b>577,423</b>	<b>222,723</b>	<b>37,788</b>	<b>392,602</b>	<b>265,563</b>	<b>37,788</b>	<b>12,596,100</b>
<b>Gloucester</b>									
Freeway	2,346,114	268,041	126,491	66,257	9,035	9,035	177,690	9,035	3,011,700
Arterial	2,747,349	277,160	162,832	69,290	10,394	176,690	10,394	10,394	3,464,500
Local	1,483,455	152,149	88,754	12,679	5,434	57,962	5,434	5,434	1,811,300
<b>Total</b>	<b>6,576,918</b>	<b>697,351</b>	<b>378,077</b>	<b>148,227</b>	<b>24,863</b>	<b>243,686</b>	<b>193,518</b>	<b>24,863</b>	<b>8,287,500</b>
<b>Mercer</b>									
Freeway	3,011,536	344,065	162,368	85,050	11,598	11,598	228,088	11,598	3,865,900
Arterial	3,224,338	325,280	191,102	81,320	12,198	207,366	12,198	12,198	4,066,000
Local	1,893,037	194,158	113,259	16,180	6,934	73,965	6,934	6,934	2,311,400
<b>Total</b>	<b>8,128,911</b>	<b>863,503</b>	<b>466,728</b>	<b>182,550</b>	<b>30,730</b>	<b>292,929</b>	<b>247,220</b>	<b>30,730</b>	<b>10,243,300</b>
<b>Total</b>	<b>35,776,196</b>	<b>3,777,230</b>	<b>2,063,423</b>	<b>797,707</b>	<b>135,124</b>	<b>1,393,366</b>	<b>963,230</b>	<b>135,124</b>	<b>45,041,400</b>

## USEPA Tier 2/Sulfur Credits

		Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2	Final Reform. Base-T2
HC		LDGV	LDGT1	LDGT2	LDDT	HDGV
	2005	0.018	0.023	0.033	0.133	0.038
NOx						
	2005	0.106	0.118	0.144	0.233	0.204

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999, Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 8&9

VOC - 2005	LDGV	LDGT1	LDGT2	LDDT	HDGV	Total
Burlington	0.0444	0.077	0.0476	0.0032	0.0085	0.1807
Camden	0.0601	0.1035	0.0646	0.0038	0.0112	0.2432
Gloucester	0.0278	0.0485	0.0303	0.0017	0.0053	0.1136
Mercer	0.0449	0.0787	0.0483	0.0034	0.0085	0.1838
Total	0.1772	0.3077	0.1908	0.0121	0.0335	0.7213

NOx - 2005

Burlington	0.4396	0.512	0.2098	0.0067	0.0553	1.2234
Camden	0.5351	0.621	0.254	0.0088	0.0567	1.4756
Gloucester	0.2728	0.3182	0.1301	0.0043	0.0338	0.7592
Mercer	0.4579	0.5342	0.2183	0.0069	0.0566	1.2739
Total	1.7054	1.9854	0.8122	0.0267	0.2024	4.7321

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999, Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 1-5

## Tier 2/Sulfur Adjustments by Vehicle Class

County	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	Total
Burlington	11,063,938	1,160,595	641,194	244,208	41,744	464,150	256,929	41,744	13,914,500
Camden	10,006,431	1,055,782	577,423	222,723	37,788	392,602	265,563	37,788	12,596,100
Gloucester	6,576,918	697,351	378,077	148,227	24,863	243,686	193,518	24,863	8,287,500
Mercer	8,128,911	863,503	466,728	182,550	30,730	292,929	247,220	30,730	10,243,300
<b>Total</b>	<b>35,776,196</b>	<b>3,777,230</b>	<b>2,063,423</b>	<b>797,707</b>	<b>135,124</b>	<b>1,393,366</b>	<b>963,230</b>	<b>135,124</b>	<b>45,041,400</b>
HC Adj Factor	0.018	0.023	0.033	0.133	0.038	0	0	0	
HC Adjustment									
Burlington	199,151	26,694	21,159	32,480	1,586	-	-	-	281,070
Camden	180,116	24,283	19,055	29,622	1,436	-	-	-	254,512
Gloucester	118,385	16,039	12,477	19,714	945	-	-	-	167,559
Mercer	146,320	19,861	15,402	24,279	1,168	-	-	-	207,030
<b>Total</b>	<b>643,972</b>	<b>86,876</b>	<b>68,093</b>	<b>106,095</b>	<b>5,135</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>910,171</b>
NOx Adj Factor	0.106	0.118	0.144	0.233	0.204	0	0	0	
NOx Adjustment									
Burlington	1,172,777	136,950	92,332	56,900	8,516	-	-	-	1,467,476
Camden	1,060,682	124,582	83,149	51,895	7,709	-	-	-	1,328,016
Gloucester	697,153	82,287	54,443	34,537	5,072	-	-	-	873,492
Mercer	861,665	101,893	67,209	42,534	6,269	-	-	-	1,079,570
<b>Total</b>	<b>3,792,277</b>	<b>445,713</b>	<b>297,133</b>	<b>185,866</b>	<b>27,565</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,748,554</b>

Source

USEPA Memorandum, Wegman, Lydia N. & Zaw-Mon, Merrylin To Air Directors, Regions I-VI, dated November 8, 1999, Regarding: 1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking, Tables 8 & 9

## Comparison of the USEPA Methods to Calculate the Tier 2/Sulfur Credits

	Base Budget		Adjustment w/ Tables 8&9		Resulting Budget	
	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)
Burlington	10.04	19.75	0.31	1.62	9.73	18.13
Camden	9.78	17.84	0.28	1.46	9.50	16.37
Gloucester	5.89	11.72	0.18	0.96	5.71	10.76
Mercer	7.69	14.78	0.23	1.19	7.47	13.59
Total	33.41	64.09	1.00	5.23	32.40	58.86

	Base Budget		Adjustment w/ Tables 1-5		VOC (tons)	NOx (tons)
	VOC (tons)	NOx (tons)	VOC (tons)	NOx (tons)		
Burlington	10.04	19.75	0.1807	1.2234	9.86	18.53
Camden	9.78	17.84	0.2432	1.4756	9.54	16.36
Gloucester	5.89	11.72	0.1136	0.7592	5.78	10.96
Mercer	7.69	14.78	0.1838	1.2739	7.51	13.51
Total	33.41	64.09	0.7213	4.7321	32.68	59.36

### Ratio Table 8&9: Tables 1-5

Burlington	1.71	1.32
Camden	1.15	0.99
Gloucester	1.63	1.27
Mercer	1.24	0.93
Total	1.39	1.11

**The State of New Jersey  
Department of Environmental**

**Proposed 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**

**Appendix II: Public Participation**

**February 4, 2000**

The announcement on the proposed revision to New Jersey's Ozone State Implementation Plan (SIP), specifically the Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Additional Emission Reduction Commitment and Transportation Conformity Budgets Plan will appear in approximately six (6) newspapers throughout the state on or before February , 2000. In addition, it will appear as a Miscellaneous Notice in the New Jersey Register on February , 2000. This proposed SIP will be transmitted to the USEPA Region II Administrator on February 4, 2000. It will be sent to the states within the Ozone Transport Region and other interested parties on or before February 7, 2000.

The Public Hearing on this proposed SIP Revision is scheduled to occur on March 7, 2000, in the War Memorial Building, Exhibition Room on the lower level, corner of West Lafayette and Barracks Streets, Trenton, New Jersey.

The comment period is scheduled to close on March 10, 2000.

Upon closure at the comment period this Appendix will be updated to include the legal notice, the State's response to comment document and verification that the advertisement did occur in compliance with 40CFR 51.102.

**The State of New Jersey  
Department of Environmental**

**Proposed 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**

**Appendix II: Public Participation**

**Attachment A: Notice of Availability**

**February 4, 2000**

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF AIR QUALITY MANAGEMENT

**NOTICE OF PUBLIC HEARING AND AVAILABILITY:**

**Proposed Revisions to the New Jersey State Implementation Plan for the Attainment and Maintenance of the One-Hour Ozone National Ambient Air Quality Standard.**

The New Jersey Department of Environmental Protection (DEP) is proposing Revisions to the New Jersey State Implementation Plan (SIP) 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. These proposed revisions are now available for inspection.

A **public hearing** is scheduled on the DEP's proposal on **March 7, 2000 at 10:00 a.m.** at the War Memorial Building, Exhibition Room on the lower level; Corner of West Lafayette and Barracks Streets, Trenton, New Jersey. This hearing is being held in accordance with the provisions of Section 110(a)(2) of the Clean Air Act, 42U.S.C. §7410; the Air Pollution Control Act (1954), N.J.S.A. 26:2C-1 *et seq.*; and the Administrative Procedures Act, N.J.S.A. 52:14 B-1 *et seq.* Written comments relevant to the proposal may be submitted until the close of business **March 10, 2000** to: Michael Marotta, Esq., DEP Docket Number 04-00-01, Office of Legal Affairs, New Jersey Department of Environmental Protection, PO Box 402, Trenton, New Jersey 08625-0402. Fax number: (609) 984-3488 (copies sent by fax should be followed with a copy sent by mail).

**Background:**

Ozone, a major constituent in smog, is produced by complex chemical reactions when its precursors, volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) react in the presence of sunlight in the lower atmosphere (troposphere). The chemical reactions that create ozone take place while the pollutants are being blown through the air by wind, or otherwise transported. Elevated levels of ozone are a threat to public health.

The federal Clean Air Act requires that states with areas which are classified as being in "serious" or worse, nonattainment for ozone, provide a demonstration of attainment of the ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date. In New Jersey's case, this affects eighteen (18) of New Jersey's twenty-one (21) counties with an attainment date of 2005 for most of southern New Jersey (6 counties) and 2007 for northern New Jersey (12 counties). On August 31, 1998, New Jersey provided a demonstration of attainment for the 1-hour averaged ozone NAAQS to the United States Environmental Protection Agency (USEPA).

On December 16, 1999, the USEPA proposed (64 Federal Register 70380) to approve the State's demonstration of attainment, provided the State address a number of conditions. This proposed SIP revision provides an update to the demonstration of attainment to meet the USEPA's conditions. One of the conditions is a commitment to achieve New Jersey's fair share of an additional level of emission reductions that were identified by the USEPA as necessary for attainment of the ozone NAAQS in the two multi-state ozone nonattainment areas that include New Jersey counties. To assist in meeting the emission reductions, the USEPA is allowing the states to take credit for the emission reductions from the recently-promulgated federal Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program.

After credit is taken for the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program, the USEPA estimates an additional emission reduction of 85 tons per day of VOC and 7 tons per day of NO<sub>x</sub> for the New York-Northern New Jersey-Long Island nonattainment areas, and 62 tons per day VOC and 3.4 tons per day NO<sub>x</sub> for the Philadelphia-Wilmington-Trenton nonattainment area will be needed. Proportioning these additional emission reductions from the multi-state nonattainment areas to New Jersey in accordance with its 1990 emission contribution to the nonattainment area, New Jersey would need to achieve about a 57 ton per day VOC and 5 ton per day NO<sub>x</sub> reduction. To some extent, additional NO<sub>x</sub> reductions can substitute for VOC reductions consistent with the Clean Air Act and USEPA Guidelines. A SIP Revision(s) incorporating programs to meet these reductions must be submitted to the USEPA by October 31, 2001.

The State is seeking comment on this proposed SIP revision. It is particularly interested in information regarding control measures that might be employed to meet the USEPA-identified emission shortfalls. The State is working with other states, including those in the Ozone Transport Commission, to try to develop measures which could be implemented on a regional basis. Potential emission source categories or measures that are currently under consideration are included in the following list.

- ancillary benefits from energy efficiency and renewable energy programs, including systems benefit charges, i.e., fees on customer electricity bills designed to fund such programs
- ancillary benefits from initiatives in New Jersey's Draft Climate Action Plan, including additional landfill controls
- electric generation performance standards
- cleaner motor-vehicle fuels, including diesel fuel
- consumer products
- distributed diesel electric generators
- industrial and commercial products and practices, including architectural and industrial maintenance coatings, gasoline dispensing containers, industrial adhesives, autobody refinishing practices and solvent cleaning practices
- non-road vehicles and equipment, including marine vessels, and engines
- aircraft and airport equipment
- State programs, e.g., incentives and procurements to promote energy efficiency,

- renewable energy, and clean electric power generation, and natural gas pipeline venting and compressor station controls

The above list is in a preliminary stage of development. Therefore, it may change, that is, the Department may add or delete potential categories as information is gathered. Thus any of the items listed above may or may not be one of the source categories included in the SIP submission due to the USEPA by October, 2001.

This SIP revision also provides a revised transportation conformity budget for the attainment years of 2005 and 2007 incorporating the predicted benefits from the federal Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline program for those years. Additionally, since the emissions benefit of the federal Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program will increase beyond this attainment years, the SIP revision proposes to reserve a portion of the incremental benefit from the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program for air quality-related purposes beyond the attainment year. Further, this SIP revision contains a series of other commitments required by the USEPA. These commitments include a commitment to update the transportation conformity budgets within one year after the MOBILE6 motor vehicle emissions model becomes available for SIP use and a modification to the State's previous commitment date for a midcourse review from 2002 to 2003.

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

March 7, 2000 at 10:00 a.m.  
War Memorial Building, Exhibition Room on the lower level  
Corner of West Lafayette and Barracks Streets  
Trenton, New Jersey

This hearing is being held in accordance with the provisions of the Air Pollution Control Act (1954), N.J.S.A. 26:2C-1 et seq. and the Administrative Procedures Act, N.J.S.A. 52:14B-1 et seq.

Written comments relevant to the proposed SIP revision may be submitted until the close of business March 10, 2000, and should be directed to:

Mike Marotta, Esq.  
Office of Legal Affairs  
New Jersey Department of Environmental Protection  
PO Box 402, Trenton, New Jersey 08625-0402

DEP Docket Number 04-00-01

The following are options for obtaining a copy of the proposed Revisions to New Jersey's State Implementation Plan (SIP) for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard (NAAQS):

1. Visit the DEP's web site at: <http://www.state.nj.us/dep/aqm/whatsnew.htm>, where Air Quality Management rules, proposals, adoptions and SIP revisions are available.
2. Inspect the proposals during normal office hours at any of these locations:

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

DEP Bureau of Enforcement  
Northern Region  
1259 Route 46 East  
Parsippany, New Jersey 07054-4191

DEP Bureau of Enforcement  
Central Region  
Horizon Center, Route 130  
P.O. Box 407  
Robbinsville, New Jersey 08625-0407

DEP Bureau of Enforcement  
Southern Region  
2 Riverside Drive, Suite 201  
Camden, New Jersey 08103

DEP Bureau of Enforcement  
Metropolitan Region  
2 Babcock Place  
West Orange, New Jersey 07052-5504

Trenton Public Library  
120 Academy Street  
Trenton, New Jersey 08608

Atlantic City Public Library  
1 North Tennessee Avenue  
Atlantic City, New Jersey 08401

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

Penns Grove / Carney's Point  
Public Library Association  
222 South Broad Street  
Penns Grove, New Jersey 08069

Burlington County Library  
3 Pioneer Blvd. and Woodlane Road  
Mt. Holly, New Jersey 08060

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

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

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

Ellen Calhoun  
Library of Science and Medicine  
Rutgers University  
P.O. Box 1029  
Piscataway, New Jersey 08855-1029

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

Freehold Public Library  
28<sup>1/2</sup> East Main Street  
Freehold, New Jersey 07728

Somerville Public Library  
35 W. End Avenue  
Somerville, New Jersey 08876

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 DEP's proposal by calling Susan Murray at (609) 292-6722, by e-mailing her at [smurray@dep.state.nj.us](mailto:smurray@dep.state.nj.us), or by mailing or faxing the attached form to her as indicated on the form.

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

**MAIL /FAX THIS PROPOSED OZONE SIP REVISION REQUEST FORM TO:**

NJDEP  
Air Quality Planning  
P.O. Box 418  
Trenton, N.J. 08625  
fax: (609) 633-6198

**ATTENTION: SUSAN MURRAY**

- Please send me a copy of the NJDEP's Proposed 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**
  
- Appendix I: Post-Processor Air Quality (PPAQ) Driver File and Output Files, Traffic Data Input Files, Spreadsheets for Emission Calculations and Tier 2 Motor Vehicle Standards / Low Sulfur Gasoline Emissions Benefit**
  
- Appendix II: Public Participation**

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

**Please let us know if you are no longer interested in being on the NJDEP's mailing list for air quality State Implementation Plan (SIP) Revisions by checking here:**