

PLAN 2035

Appendix G

Air Quality Conformity Determination

This document is an appendix to Plan 2035, the Regional Transportation Plan for Northern New Jersey. The full document is available at www.NJTPA.org. Plan 2035 was prepared and published by the North Jersey Transportation Planning Authority, Inc. with funding from the Federal Transit Administration and the Federal Highway Administration. The NJTPA is solely responsible for its contents.

Correspondence or questions relating to this report may be addressed to:

The Executive Director
North Jersey Transportation Planning Authority
One Newark Center, 17th Floor, Newark, NJ 07102-1982
Telephone: 973-639-8400
Fax: 973-639-1953
Web: www.njtpa.org
E-mail: njtpa@njtpa.org

North Jersey Transportation Planning Authority, Inc.

THE NORTHERN NEW JERSEY

**AIR QUALITY
CONFORMITY DETERMINATION**

**on the 2009 Regional Transportation Plan (“Plan 2035”) and
the FY 2010-2013 Transportation Improvement Program
for the NJTPA portions of**

**the New York-Northern New Jersey-Long Island, NY-NJ-CT
8-hour Ozone Nonattainment Area,**

**the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE
8-hour Ozone Nonattainment Area,**

**the New York-Northern New Jersey-Long Island, NY-NJ-CT and
the formerly not classified Carbon Monoxide Maintenance Areas,**

**and the New York-Northern New Jersey-Long Island, NY-NJ-CT
PM_{2.5} Nonattainment Area**



Note: Under the 8-hour ozone standard, the NJTPA region is part of two different nonattainment areas: New York-Northern New Jersey-Long Island, NY-NJ-CT; and Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE. Also, portions of the NJTPA region are part of the New York-Northern New Jersey-Long Island, NY-NJ-CT and the formerly not classified carbon monoxide nonattainment areas, and part of the New York-Northern New Jersey-Long Island, NY-NJ-CT PM_{2.5} nonattainment area.

June 25, 2009

Table of Contents and Figures

<i>Executive Summary</i>	5
<i>Introduction: What is conformity?</i>	7
<i>Nonattainment and Maintenance Areas in the NJTPA Region</i>	7
Ozone Nonattainment Areas	7
Carbon Monoxide Maintenance Areas	7
PM_{2.5} Nonattainment Area	7
<i>What does the conformity requirement mean for northern New Jersey?</i>	8
<i>How does NJTPA fulfill the conformity requirement?</i>	9
The Formal Requirements	9
Defining Scenarios	14
Key Concepts	15
The Modeling Results	17
<i>Conclusion (Overall)</i>	18
<i>Appendices</i>	A-1

Figure 1. NJTPA Nonattainment & Maintenance Areas for Carbon Monoxide, 8-hour Ozone, and PM _{2.5}	5
Figure 2: Annual Violations of the Ozone Standard in New Jersey	8
Figure 3: Current & Future Population of NJTPA.....	11
Table 1: Average Daily PMT in Each NJTPA County in the NJTPA Region.....	11
Figure 4: Annual PATH Ridership From 1970 – 2008.....	12
Figure 5: Annual Ridership on New Jersey Transit, FY ‘86-FY ‘08 (All North Jersey Bus and Light Rail Services and All Rail Service Except Atlantic City Line).....	12
Table 2. Horizon year for each Nonattainment Area in NJTPA	15
Table 3: VOC Budget Test, 12-County Northern New Jersey Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Areas.....	17
Table 4: NO _x Budget Test, 12-County Northern New Jersey Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Area	17
Table 5: VOC Budget Test, NJTPA portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-Hour Ozone Nonattainment Areas.....	17
Table 6: NO _x Budget Test, NJTPA portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-Hour Ozone Nonattainment Areas.....	17
Table 7. Carbon Monoxide Budget Test, Northern New Jersey Maintenance Areas	18
Table 8. Direct PM _{2.5} Budget Test, 9-County NJTPA Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Annual PM _{2.5} Nonattainment Areas.....	18
Table 9. NO _x Budget Test, 9-County NJTPA Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Annual PM _{2.5} Nonattainment Areas	18
Figure 7: NO _x and VOC Budgets and Projected Emissions for Ocean County, 2010-2035.....	20
Figure 6: NO _x and VOC Budgets and Projected Emissions: NJTPA portion of the New York-Northern New Jersey-Long Island 8-Hour Ozone Nonattainment Area: 2010-2035.....	20
Figure 8: CO Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island Carbon Monoxide Maintenance Area 2010-2035.....	21

Figure 9: Direct PM _{2.5} Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island PM _{2.5} Nonattainment Area 2010-2035.....	21
Figure 10: NO _x Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island PM _{2.5} Nonattainment Area 2010-2035	22
Figure 11: Projected Daily Summer and Winter VMT Growth from 2010 to 2035 in the NJTPA Region.....	22
Table 10. Evaluation of the Conformity Determination Criteria	23

Important Acronyms

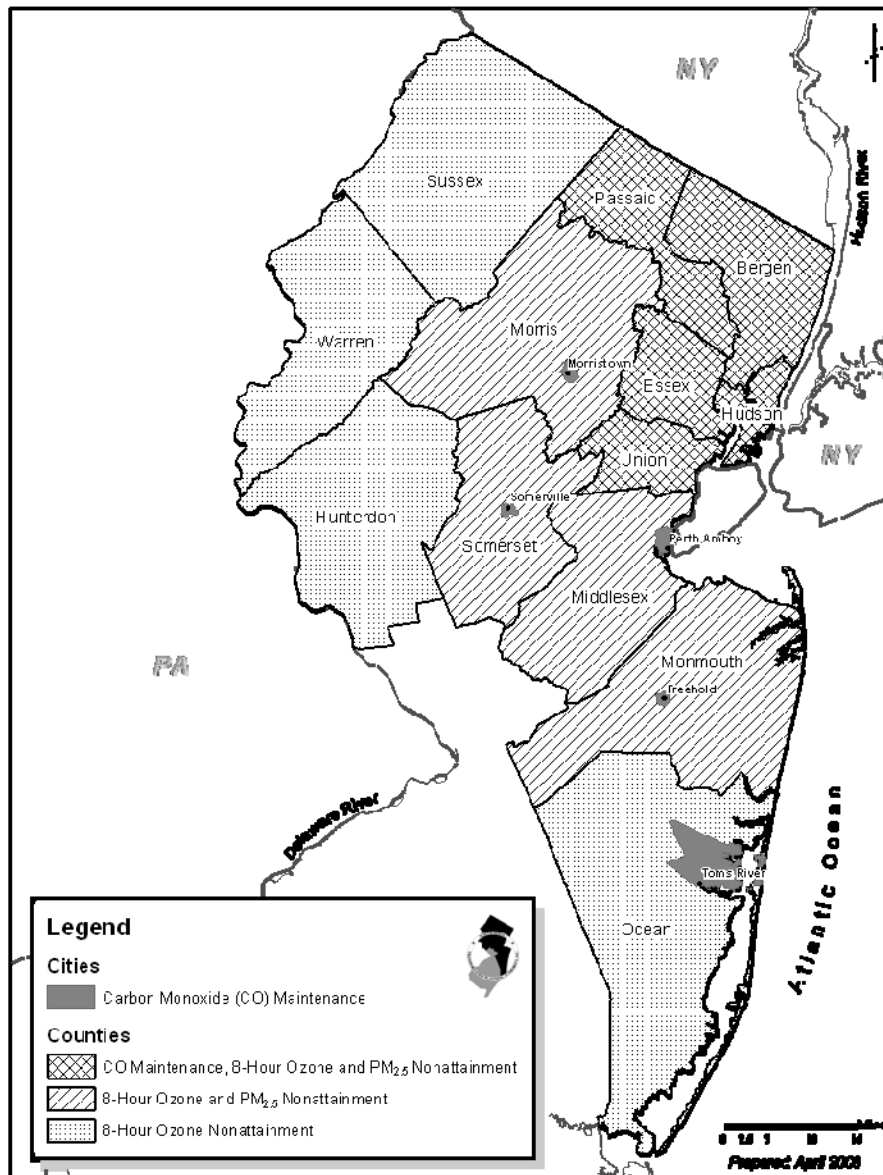
Acronym	Meaning
ARRA	American Recovery and Reinvestment Act
CAAA	Clean Air Act Amendments (1990)
CO	Carbon Monoxide
FSD	Final Scope Development (Now PD)
GHG	Greenhouse Gases
ISTEA	Intermodal Surface Transportation Efficiency Act
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NJDEP	N.J. Department of Environmental Protection
NJDOT	N.J. Department of Transportation
NJMC	N.J. Meadowlands Commission
NJRTME	North Jersey Regional Transportation Model Enhancement
NJTPA	North Jersey Transportation Planning Authority
NO _x	Nitrogen Oxides
PANYNJ	Port Authority of New York and New Jersey
PD	Preliminary Design (Formerly FSD)
PDWP	Project Development Work Program
PM _{2.5}	Fine Particulate Matter
PMT	Person Miles Traveled
ROP	Rate of Progress
RTP	Regional Transportation Plan
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SD	Study and Development
SIP	State Implementation Plan
STIP	Statewide Transportation Improvement Program
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

Executive Summary

The NJTPA has determined that the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 Transportation Improvement Program for northern New Jersey conform to the State Implementation Plan (SIP) established by the New Jersey Department of Environmental Protection (NJDEP).

Conformity is the process, established by joint guidance from the United States Department of Transportation and the United States Environmental Protection Agency (USEPA) that ensures that transportation investments will contribute to improving air quality in areas where concentrations of certain pollutants exceed national standards. There are several areas in the NJTPA region that do not meet federal air quality standards for ozone, carbon monoxide, and/or fine particulate matter (PM_{2.5}) as depicted in Figure 1.

Figure 1. NJTPA Nonattainment & Maintenance Areas for Carbon Monoxide, 8-hour Ozone, and PM_{2.5}



Ozone

Effective June 15, 2004, the USEPA finalized ground-level ozone designations under the new 8-hour ozone NAAQS, which replaced the previous 1-hour ozone NAAQS. On October 29, 2007, NJDEP submitted a SIP revision to USEPA for the attainment and maintenance of the ozone NAAQS, which contained 8-hour ozone budgets for the reasonable further progress (RFP) year of 2008, and the attainment year of 2009. Effective June 15, 2009, USEPA informed NJDEP that the budgets in the SIP revision remained adequate for transportation conformity purposes. The NJDEP budgets for 2009 were found adequate for conformity because they serve to strengthen the SIP through continued progress towards attainment. In accordance with this Final Rule the NJTPA is using the 2009 budgets in this conformity determination. Attainment of the new federal ozone standards in the area originally required by the year 2010 has not yet been approved by USEPA therefore the NJTPA is using the 2009 budgets in this conformity determination. Under the new 8-hour ozone standard, twelve NJTPA counties (the entire NJTPA region with the exception of Ocean County) are in the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-hour Ozone Nonattainment Area. Ocean County is part of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-hour Ozone Nonattainment Area.

Carbon Monoxide

Portions of the northern New Jersey region continue to be in a maintenance area for carbon monoxide (CO). “Maintenance” means that northern Jersey has been redesignated to attainment with regards to CO standards, and the region must show that it can maintain ambient CO standards for a period of at least 20 years. For the New Jersey portion of the New York-Northern New Jersey-Long Island Area which includes Bergen, Essex, Hudson, Passaic and Union counties, New Jersey is still in the middle of its first 10-year Maintenance Plan which extends to 2014. For the formerly not classified areas (Freehold Borough, Monmouth County; Morristown Town, Morris County; Perth Amboy City, Middlesex County; Toms River, Ocean County; and Somerville Borough, Somerset County), New Jersey has maintained attainment for 10 years and is no longer required to complete a regional emissions analysis for these areas. A new limited maintenance plan was approved by USEPA on July 10, 2006.

Fine Particulate Matter

In July 1997, the USEPA issued standards for PM_{2.5}, designed to protect the public from exposure to PM_{2.5} at levels that may cause health problems. Areas are required to meet the PM_{2.5} NAAQS (“reach attainment”) as soon as possible, but no later than 2010. Nine counties in the NJTPA region are included in the New York-Northern New Jersey- Long Island, NY-NJ-CT PM_{2.5} annual nonattainment area. Those counties include: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset and Union Counties. The NJDEP emission budgets for PM_{2.5} became effective on June 23, 2006. NJTPA utilized these budgets in this conformity determination.

Results

Based on the emission modeling results presented in this document, for all applicable horizon years (2010, 2014, 2020, 2030 and 2035), the total forecasted emissions of carbon monoxide (CO); ozone precursors—nitrogen oxides (NO_x) and volatile organic compounds (VOC); and PM_{2.5} and its precursor (NO_x) are below the budgets provided in the SIP by NJDEP. In the process of reaching this determination, the NJTPA has satisfied all requirements of the federal final conformity rule (40 CFR93), as amended by the USEPA on July 1, 2004; May 6, 2005; and January 24, 2008.

Introduction: What is conformity?

Conformity is the process, established by joint guidance from the United States Department of Transportation (USDOT) and the United States Environmental Protection Agency (USEPA) that ensures transportation investments will contribute to improving air quality in areas where concentrations of certain pollutants exceed national standards. Conformity emerged from the back-to-back passage of environmental and transportation legislation in the early nineties (Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991, referred to as CAAA and ISTEA, respectively). USEPA promulgated the transportation conformity rule initially in 1993, and established major revisions to the rule in 1997, 2004, and 2005. USEPA implemented the latest Final Rule on January 24, 2008.

Conformity works in the following way:

- USEPA establishes National Ambient Air Quality Standards (NAAQS) based on public health research. The standards set maximum concentrations of six criteria pollutants in the ambient (outdoor) air.
- USEPA designates parts of the country where a standard is exceeded as a “nonattainment area.”
- States that have nonattainment areas are required to submit State Implementation Plans (SIPs) to USEPA to demonstrate how the nonattainment areas will improve their air quality and meet the standard. SIPs contain mobile source emission budgets or limits that are to be used in a conformity analysis.
- Nonattainment areas must ensure that their transportation plans, programs, and projects conform to the state’s air quality plan or SIP by showing that the mobile source emissions produced do not exceed the budgets. This means that transportation projects will not worsen air quality, or interfere with the purpose of the SIP which is to attain the NAAQS.

Nonattainment and Maintenance Areas in the NJTPA Region

OZONE NONATTAINMENT AREAS

The NJTPA has 12 counties which lie within the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Area: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, and Warren.

In addition, Ocean County lies within the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-Hour Ozone Nonattainment Area. Because Ocean County is in a different nonattainment area than the rest of the region, a separate emission budget and modeling results are shown for this county.

As seen in Figure 2, ozone violations—the number of days per year that ozone concentrations exceeded the ozone standard—have been generally decreasing over the years in New Jersey from 1988 to 2008.

CARBON MONOXIDE MAINTENANCE AREAS

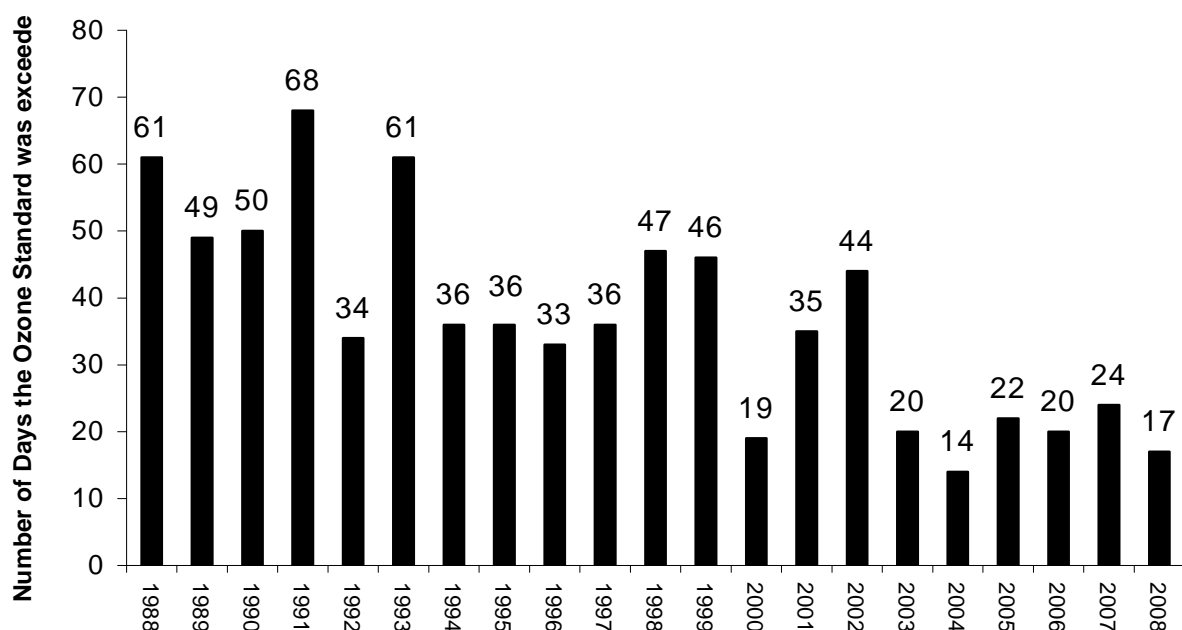
The NJTPA region is currently designated as attainment for CO NAAQS. However, as a former nonattainment area, it must show that it can maintain ambient CO standards for a period of at least 20 years. As of now, northern New Jersey is still in the middle of its first 10-year maintenance plan, which has a 2014 horizon year. The NJTPA portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT CO Maintenance Area consists of Bergen, Essex, Hudson, Passaic (part) and Union counties.

There are an additional five CO maintenance (formerly not classified) areas designated by USEPA within the NJTPA region. These are: Freehold Borough, Monmouth County; Morristown Town, Morris County; Perth Amboy City, Middlesex County; Toms River, Ocean County; and Somerville Borough, Somerset County. These areas are governed by a maintenance plan which had a 2007 horizon year. On July 10, 2006, USEPA approved a second maintenance plan, known as a “limited maintenance plan,” for these formerly not classified areas. This limited maintenance plan has a 2017 horizon year. Because of the limited maintenance plan, NJTPA no longer has to complete a regional emissions analysis for the formerly not classified areas; however, all other transportation conformity requirements still apply.

PM_{2.5} NONATTAINMENT AREA

Nine of the thirteen NJTPA counties lie within the New York-Northern New Jersey-Long Island, NY-NJ-CT PM_{2.5} Nonattainment Area: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset, and Union. New PM_{2.5} budgets became effective on June 23, 2006.

Figure 2: Annual Violations of the Ozone Standard in New Jersey¹



SOURCE: NJDEP

What does the conformity requirement mean for northern New Jersey?

It is NJTPA's responsibility, as the Metropolitan Planning Organization (MPO) for a nonattainment area, to consider the air quality impacts of its transportation investments. It must also maintain a commitment to projects that have explicit air quality benefits, such as the improvement and promotion of transit service and congestion mitigation initiatives. Substantively, the greatest challenge to reducing mobile source emissions is the trend of constantly rising vehicle miles traveled (VMT) in this heavily populated, mobile region. Increasing auto ownership, increasing distances from home to work and other major destinations, and higher rates of trip making all contribute to rising VMT and the pollution associated with it. The two primary approaches for reducing mobile source pollution are reducing overall VMT and reducing the emission rate (pollution per VMT). There are many examples of strategies within each of these categories in NJTPA's transportation plan.

Operationally, conformity requires NJTPA to maintain data and perform analyses based on computer modeling. It must be shown that the total emissions produced by the mobile sources will not exceed the budgets assigned by NJDEP. To do this, NJTPA uses a regional transportation model to estimate vehicle miles traveled (VMT). The model includes characteristics of the region such as demographics, tolls, fares, and current transportation policies. Transportation projects included in the Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) are coded into a network reflecting a particular scenario year. The VMT estimated by running the model is translated into emission projections through an USEPA model, MOBILE6.2. These emission projections must be consistent with those contained in the SIP.

It is important to ensure that the conformity determination is based on the mix of new and existing projects and the current infrastructure. Some projects, particularly capacity expansions, may be individually deleterious to air quality but may be offset by beneficial initiatives such as new transit projects and engineering improvements that mitigate local congestion. The conformity regulations recognize this balancing between projects that increase and reduce emissions by requiring that MPOs demonstrate that the overall set of investments moves the region toward cleaner air, in keeping with NJDEP and USEPA policies.

¹ This figure shows the number of days with ozone violations for the entire state of New Jersey, not just the NJTPA region.

The conformity process also requires a heightened level of cooperation among many agencies relevant to the region including state and federal entities. If NJTPA is to do more than meet the minimum requirements, it must pursue the types of investments that can have long-term air quality benefits as well as dividends in the areas of regional accessibility and mobility. To do this, the NJTPA staff must be involved with pro-active efforts to encourage alternative fuel vehicles and clean diesel technology, to support implementation of land-use planning efforts that reduce trip length, and to be involved with the development of the SIP and other air quality plans.

How does NJTPA fulfill the conformity requirement?

THE FORMAL REQUIREMENTS

The conformity process is largely a technical one at the heart of which is the comparison of emission projections for mobile sources against the emission budgets established by NJDEP. This comparison is known as the budget test. Conformity and the goals it represents also guide other planning activities by the MPO and NJ Department of Transportation (NJDOT). As a result, NJTPA attends carefully to the requirements of the Final Transportation Conformity Rule for creating opportunities for public involvement and interagency consultation in the process.

Public Involvement Requirements

The regulations require an effective process of public participation, which includes reasonable access to technical information. This is particularly challenging as the regional emissions modeling process is a complex technical exercise that integrates traditional travel demand modeling and state of the art emissions modeling.

To address the task of adequately disseminating the information, NJTPA distributes the determination report (this document) in conjunction with the TIP and RTP to representative stakeholders and other interested parties, in addition to the general public, for a thirty-day public comment period (June 23 to July 22, 2009). A public meeting will be held at the NJTPA offices on July 13, 2009, from 4:00 PM to 7:00 PM. Additional public meetings (focusing on the 2009 Plan (“Plan 2035”)) are being scheduled during the public comment period. Public notices will be placed in major daily newspapers, announcing the comment period and public meeting, and stating that the document is available in the region’s New Jersey Network Libraries. More information on the RTP, TIP, this report, and supporting documents is available on NJTPA’s website, www.njtpa.org.

Regarding the accessibility of the report’s substance to non-specialists and members of the general public, NJTPA provides a public workshop during the conformity process at which the modeling and the project classification processes are presented and discussed. For the Conformity Determination on the 2009 Plan (“Plan 2035”) and the FY 2010-2013 TIP, this workshop will be held on July 13, 2009, from 2:00 P.M. to 4:00 P.M., at the NJTPA offices in Newark, NJ.

Subsequent to the public comment period, this report may be revised to address comments made by members of the public.

Interagency Consultation Requirements

In addition to extensive public involvement, each MPO is mandated to consult regularly and openly with other relevant agencies. This includes federal and state agencies dealing with both the environment and transportation. NJTPA’s Conformity Interagency Consultation Group (ICG) consists of members from the USDOT—including both the Federal Transit Administration (FTA) and Federal Highway Administration (FHWA)—USEPA, NJDOT, NJDEP, and NJ Transit.

The interagency group performs several functions in order to ensure broad support for the region’s transportation and air quality planning activities from all relevant planning, regulatory, and implementing institutions. Typically, the group meets at the beginning of each conformity “season” to affirm the set of planning assumptions, which supports the modeling activities, and the procedures for conducting the conformity analysis; conducts a second meeting to discuss the classification of new projects and any changes to the existing project lists; and meets a final time to discuss and ratify the results of the emissions modeling work before the conformity determination report is issued for public comment and eventual adoption with the TIP. For this conformity determination, three meetings of the ICG were held: on February 5 (to kick off the conformity analysis and discuss planning assumptions), May 12 (to discuss preliminary project classifications), and June 18 (to discuss the draft conformity determination document). The meetings are held by teleconference, and the distribution of draft documents is accomplished exclusively by e-mail.

Note that the NJTPA staff is responsible for making the initial classification of TIP projects that are in at least the preliminary design (formerly final scope development) phase, along with those projects under development by other regional transportation agencies (such as the Port Authority of New York and New Jersey, the New Jersey Turnpike Authority, and projects under the jurisdiction of the Palisades Interstate Park Commission, the New Jersey Meadowlands Commission and the Delaware River Joint Toll Bridge Commission). In some cases, members of the interagency group may dispute or appeal the staff's classification and the group deliberates until consensus is reached. For a discussion of the classification process, please see the section on classification under "Defining Scenarios" below. Once the project lists are finalized, the modeling process, which is described in detail in the next section, takes place and the emissions are estimated.

Modeling Process Requirements

As discussed above, the pivotal issue in conformity is ensuring that emissions associated with regional travel will not exceed the budgets established by the NJDEP. The emission projections used to perform the conformity budget test are based on the volume of travel in the region and the emission rates of the vehicles used to achieve that travel. Each of these is based on a set of emission factors. For example, older vehicles pollute more than newer; larger vehicles, such as pickup trucks and sport utility vehicles are dirtier than sedans. Emissions associated with local, slow, stop-and-go travel are different from the emissions associated with regional expressways. The emission rate also varies with the roadway conditions and temperature. Generally, ozone emissions are modeled assuming a typical summer day (when ozone levels are likely to be the highest), while CO emissions are modeled assuming a typical winter day (when CO levels are likely to be highest). Since the region fails to meet the PM_{2.5} annual standard, PM_{2.5} and NO_x emissions are modeled for the entire year.

In addition to the factors used to calculate the emission rates, the projections are based on regional VMT. The North Jersey Regional Transportation Model - Enhanced (NJRTM-E) is NJTPA's travel model that forecasts vehicular activity and VMT on roadway facilities in the region. Based on emission rates associated with those facilities and the vehicles in operation, it is possible to calculate the total emissions for the region. Thus, the projected emissions are a function of many factors, including the vehicle fleet, the state of the highway network and the travel patterns of the region's residents and employees.

Planning Assumption Requirements

Updating the highway network to reflect changes in the infrastructure brought about by the Transportation Improvement Program (TIP) is the crux of the annual conformity process. However, it is also important to ensure that the other factors that influence emissions within the travel demand and emissions models are up to date. These factors are called "planning assumptions." The Final Conformity Rule identifies the set of planning assumptions that must be revisited for each conformity cycle. The four sets of assumptions for the conformity determination are discussed below.

1) Vehicle Registration Data

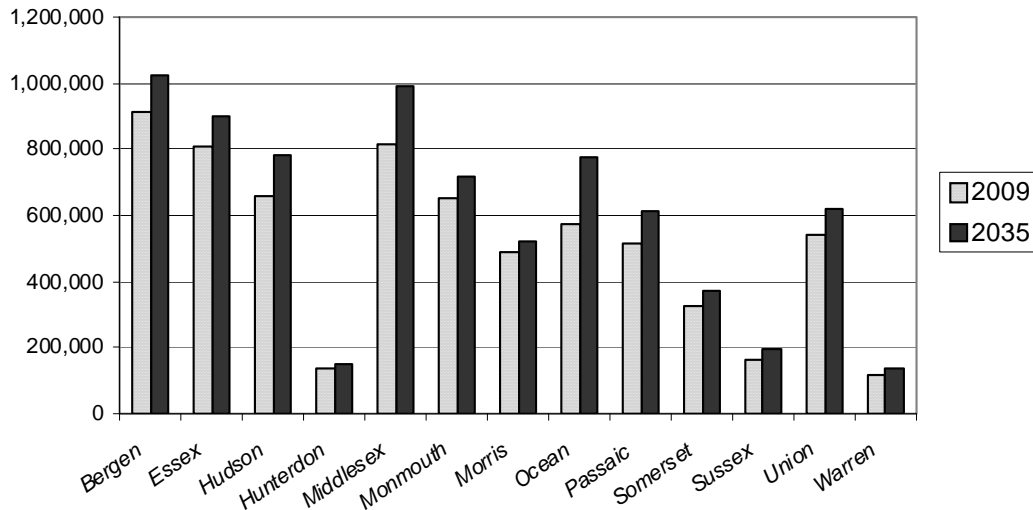
The latest available vehicle registration data were used in this analysis. These data were developed by NJDEP in June 2007 and included updated vehicle type mix data.

2) Estimates of Current and Future Population, Employment, Travel and Congestion

In northern New Jersey, which is an old metropolitan area by American standards, the land use and population growth patterns are well established. In the time frame of RTP, the projections reveal continued growth in all counties of the region as illustrated in Figure 3. These projections are from the draft Regional Transportation Plan ("Plan 2035") being developed concurrent with this conformity determination.

The NJRTM-E includes areas outside of the thirteen counties that comprise the NJTPA region. For these areas, NJTPA collected the latest approved demographic forecast information where available.

Figure 3: Current & Future Population of NJTPA



SOURCE: NJTPA 2009 Regional Transportation Plan ("Plan 2035")

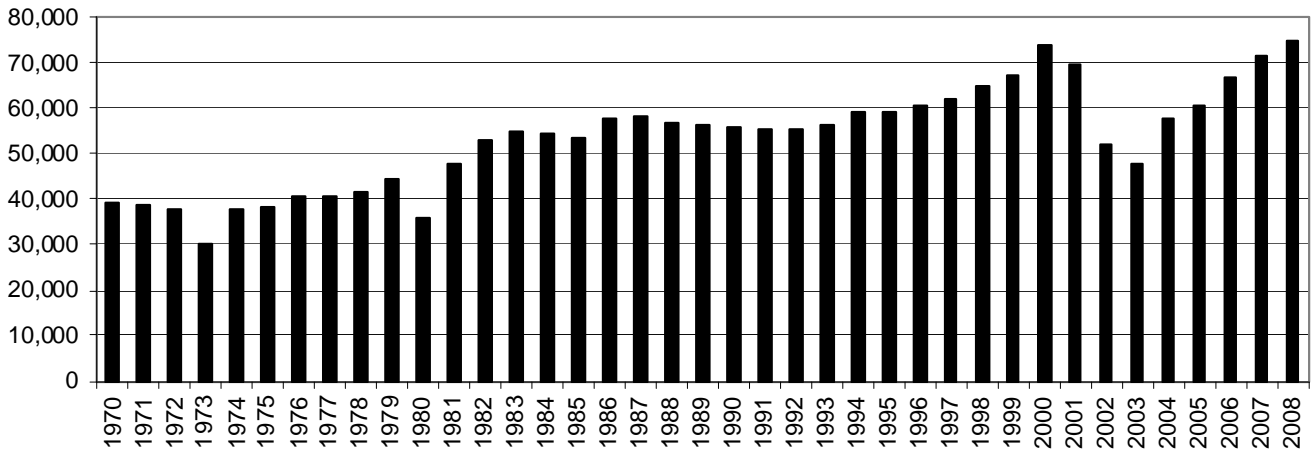
Other factors considered by the NJTPA and the interagency group include the distribution of household sizes and the location of jobs around the region. The transportation model forecasts aggregate measures of VMT and Vehicle Hours Traveled (VHT).

Table 1: Average Daily Trips and Distances in Each NJTPA County in the NJTPA Region

County	Weekday Trips per Person	Average Distance Traveled per Person per Weekday
Warren	3.4	47 miles
Sussex	3.4	45 miles
Hunterdon	3.4	44 miles
Monmouth	3.7	42 miles
Morris	3.6	40 miles
Somerset	3.8	36 miles
Bergen	3.7	33 miles
Middlesex	3.3	31 miles
Union	3.5	28 miles
Passaic	3.3	27 miles
Essex	3.0	23 miles
Hudson	2.8	19 miles
Ocean	2.9	41 miles

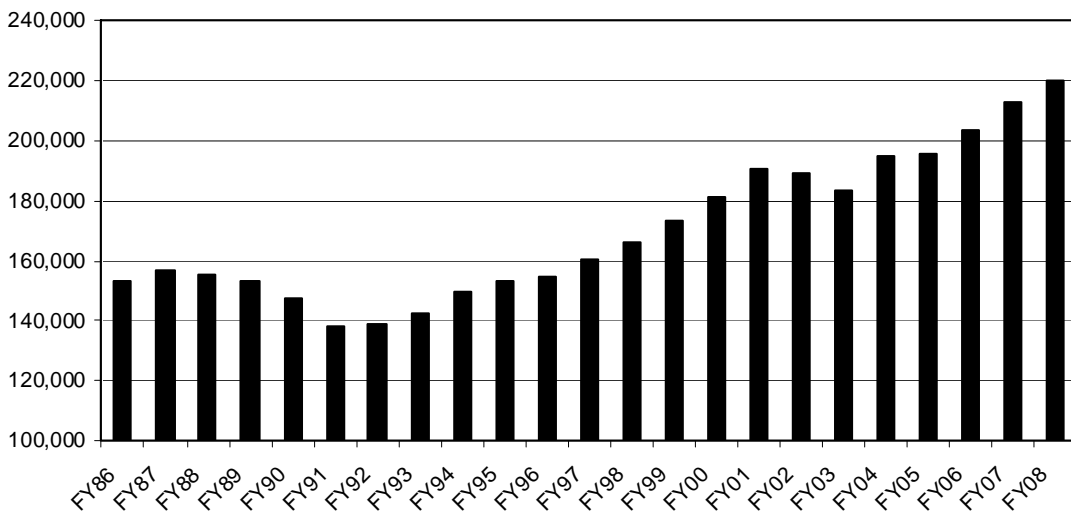
SOURCE: 1997/98 Regional Travel Household Interview Survey, NJTPA/NYMTTC 2000

Figure 4: Annual PATH Ridership From 1970 – 2008



SOURCE: Port Authority of New York and New Jersey

**Figure 5: Annual Ridership on New Jersey Transit, FY '86-FY '08
(All North Jersey Bus and Light Rail Services and All Rail Service Except Atlantic City Line)²**



3) Transit Operating Policies, Ridership Trends

Transit services are provided by NJ Transit and private bus companies throughout the region as well as the PATH subway connecting Newark and Hoboken to Manhattan. NJ Transit alone serves over 200 million passenger trips annually and provides service in each of the 13 counties. Transit services, in particular NJ Transit, have experienced a significant rise in ridership in recent years, a trend that has been attributed to relatively stable fares, improved service and reliability and regional economic conditions. Both Figures 4 and 5 summarize transit ridership trends in the NJTPA region. Figure 4 covers ridership on the PATH, which has service in Essex and Hudson counties. Figure 5 illustrates ridership on New Jersey Transit bus and rail service for the 13-county northern New Jersey region. As

² This graph also includes ridership originating from and traveling to Ocean County, part of the NJTPA region, but not part of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Area.

seen from both Figures 4 and 5, there has been an overall increase in transit ridership over the past several decades, although there was a dip in this trend for the PATH trains following the terrorist attacks on September 11, 2001.

In addition to routes operated by NJ Transit, all thirteen counties in northern New Jersey operate community shuttle transportation services funded through a variety of federal, state, regional and local programs.

4) Transit Service and Fare Changes, Road and Bridge Tolls

NJ Transit last implemented a fare increase in June 2007; however, this fare increase is consistent with inflation, which is assumed in the NJ Transit and NJTPA models. The Port Authority of NY & NJ implemented a fare increase on its Hudson River crossings (bridges, tunnels, and PATH) in March 2008; and the NJ Turnpike Authority increased tolls on both the NJ Turnpike and Garden State Parkway in December 2008. These fare and toll increases are also consistent with inflation.

The Port Authority and Turnpike Authority vary tolls based on the time of day, applying a higher fee for travel during peak periods in the peak direction. This could influence travel patterns but the effect would be difficult to estimate and were deemed not significant for this analysis.

Finally, an important toll-related issue facing the region is the impact of the electronic toll collection (ETC) on the NJ Turnpike, the Garden State Parkway and at various river crossings. The implementation of this technology reduces vehicle delay at toll plazas and decreases emissions as a result of reductions in the amount of vehicles queued at the plazas. This effect is also difficult to estimate and was considered to have minimal significance for the regional emissions analysis. However, as a New Jersey Turnpike Authority analysis and a similar analysis for the Garden State Parkway detailing the emissions impacts of ETC were available, the emissions impacts of ETC on these facilities were included as an off model emissions credit.

Other Requirements

Other requirements of the Final Transportation Conformity Rule are discussed below.

1) Monitoring the Inspection and Maintenance program

In 2003, the Inspection and Maintenance program was enhanced using an On-Board Diagnostic system (OBD) to test a vehicle's operating system, replacing the previous method, which tested a vehicle's tailpipe emissions. The Interagency Group will continue to monitor the enhanced Inspection and Maintenance program for conformity purposes in northern New Jersey.

2) Using the latest emissions model

The conformity determination must use the latest applicable emissions model to estimate regional emissions. For the current regional emissions analysis, the NJTPA has used Mobile 6.2 for its analysis of ozone precursors, PM_{2.5} and its precursor, and CO emissions³. The modeling process began on April 29, 2009 and will be completed on June 18, 2009.

3) Meeting specific requirements for models in nonattainment areas after January 1, 1997

The Final Transportation Conformity Rule section §93.122 describes a series of requirements for travel demand models used to generate regional emissions estimates after January 1, 1997 in previously designated serious, severe, and extreme ozone nonattainment areas such as northern New Jersey. These requirements cover five subject areas:

- General Model Requirements
- Consistency with Highway Performance Monitoring System (HPMS) Vehicle Miles Traveled (VMT) Estimates
- Reasonable Methods to Estimate Off Network VMT
- Capacity and Volume Sensitive Speed and Delay Estimates

³ All MOBILE6.2 and PPSUITE (post-processor) input and output files are available by contacting Liz DeRuchie at liz@njtpa.org.

- Consistency with SIP Emissions Modeling Assumptions

A detailed discussion of each of these subjects and the way in which they are addressed by the North Jersey Regional Travel Model Enhancement (NJRTME) can be found in the supporting documentation *Travel Demand Modeling and Project Coding* available on the NJTPA website. That document shows that the NJRTME meets all of the required elements of the rule.

4) Permitting the timely implementation of Transportation Control Measures (TCMs)

A TCM must be identified by NJDEP’s State Implementation Plan in order to be included, for credit, in the conformity determination. In the case of NJTPA and its region, there are no TCMs in the SIP and therefore this requirement is moot.

5) Meeting the conformity tests listed for nonattainment areas

The only test applicable to NJTPA’s conformity process is the “Budget Test,” which requires the emissions projection for several horizon years to be compared against emissions budgets established in the SIP. This requirement is the main substance of this determination and is consequently the subject of the balance of this report.

DEFINING SCENARIOS

The Final Transportation Conformity Rule that establishes the formal requirements in the previous section also lays out a four-step protocol for completing the determination. These four steps, described below, standardize what will be modeled for the emission projections.

Projects in the revised RTP must be classified in terms of their exemption status

The projects listed in the RTP/TIP are examined using the guidelines suggested in the Final Transportation Conformity Rule Sections §93.126 through §93.128. These sections list the criteria to determine whether or not a specific project must be included in the Regional Emissions Modeling to determine conformity. All projects are classified on two levels. First, some projects are deemed *exempt* from the regional emissions analysis. The Conformity Final Rule establishes exemption categories for projects that have no bearing on emissions, such as shoulder improvements, in-kind bridge replacements, and interchange reconfigurations. All non-exempt projects must be further classified on the basis of regional significance. Using a definition that is revisited each year at the first interagency meeting, certain projects are found to be not regionally significant, meaning that they will not alter travel patterns sufficiently to influence pollution levels. These classifications are critical in the event of a conformity lapse or freeze, during which time exempt and non-regionally significant non-federal projects are allowed to proceed. In addition, some projects are not included in the regional emissions estimates because there is *no acceptable modeling methodology*. More detail on this process can be found in the section on “Not-modeled network improvements” below.

All projects from the FY 2010-2013 TIP and the 2009 NJTPA RTP (“Plan 2035”), those with non-Federal funding sources (such as the NJ Turnpike Authority, Port Authority of NY and NJ, and the Delaware River Joint Toll Bridge Commission) are included in Appendix 1.

The horizon years must be defined

There are seven specific years that are important to this conformity analysis, including two reference years, and five horizon years that are analyzed to perform the conformity determination:

Reference Years

2000—Base year (year used to validate the travel demand model)

2009—Existing and committed network (includes all existing roadways plus improvements expected to be completed by the end of 2009)

Horizon Years

2010—Attainment horizon year (under 8-hour Ozone standard)

2014—Final horizon year of current CO Maintenance Plan for NJTPA portion of the New York-New Jersey-Long Island, NY-NJ-CT CO Maintenance Area

2020—Interim horizon year (no two horizon years can be more than 10 years apart)

2030—Interim horizon year (no two horizon years can be more than 10 years apart)
 2035—Regional Transportation Plan (“Plan 2035”)horizon year (horizon year of RTP must be modeled)

Table 2. Horizon year for each Nonattainment Area in NJTPA

Pollutant	Defined Area	2010	2014	2020	2030	2035
Ozone	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-hour Ozone Nonattainment Area	X		X	X	X
Ozone	New York-Northern New Jersey-Long Island, NY-NJ-CT 8-hour Ozone Nonattainment Area	X		X	X	X
Carbon Monoxide	New York-New Jersey-Long Island, NY-NJ-CT CO Maintenance Area	X	X ⁴	X	X	X
PM _{2.5}	New York-Northern New Jersey-Long Island, NY-NJ-CT PM _{2.5} Nonattainment Area	X		X	X	X

Represent entire transportation system

The fundamental purpose of conformity is to model the emissions that will occur on the transportation network, taking into account effects of investments made during the interim. The RTP is an agenda of those investments and therefore the conformity analysis should be most accurate when the project list used for the model is truly comprehensive. As stated in 40 CFR 93.118(d), consistency with the motor vehicle emissions budget(s) must be demonstrated by including emissions from the entire transportation system, including all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the nonattainment or maintenance area in the timeframe of the analysis.

Not-modeled network improvements must be identified

All non-exempt projects are categorized as either “Modeled” or “Not Modeled.” Intelligent Transportation Systems (ITS) are an example of a type of project that is “Not Modeled.” Although its impact may be regional, there is no established way to properly define and represent it in the transportation model. Many of the projects classified as “Not Modeled,” are considered in the analysis using an “off-model” process. Projects treated as “off-model” include projects whose impacts are estimated by other models, such as NJ Transit’s Demand Forecasting Model. These estimated impacts are then included as VMT credits in the results of the conformity analysis. A complete list of the VMT credits used for this analysis can be found in Appendix 4.

Summary

With these four steps completed, the MPO is prepared to project the pollution impacts of the project list supported by the 25-year Regional Transportation Plan and the 4-year Transportation Improvement Program. The modeling results in emission estimates for the specified horizon years, to be compared to budgets established by NJDEP in those same years. If the emissions estimate is greater than the budget in any horizon year, the RTP and the TIP fail the budget test and are found to be non-conforming until changes are made or other reductions are identified. The following section discusses the results of the tests for the RTP and the TIP.

KEY CONCEPTS

The findings for each emission test is represented by a table that includes columns for each of the applicable horizon years (2010, 2014 (interpolated), 2020, 2030 and 2035) and rows for the following pieces of information:

⁴ The emissions for the analysis year 2014 are interpolated between 2010 and 2020.

Emission Budgets

As noted above, USEPA approved daily budgets for emissions of VOC and NO_x (ozone precursors)⁵, and carbon monoxide, and annual budgets for emissions of PM_{2.5} and NO_x (PM_{2.5} precursor)⁶. These budgets represent the maximum amount of each pollutant that can be generated by mobile on-road sources, such as cars, trucks, and buses, for a specified time period.

In general, the budgets have been reducing over time, and will continue their decline until the attainment year at which point the budget is fixed in order to maintain the attainment of the air quality standard.

Carbon Monoxide Emission Budgets

The current CO budgets are given in tons per day (TPD). The emission budgets for carbon monoxide became effective July 10, 2006.

Ozone Emission Budgets

The ozone (NO_x and VOC) budgets are also given in tons per day (TPD). On October 29, 2007, NJDEP submitted a SIP revision to USEPA for the attainment and maintenance of the ozone NAAQS, which contained 8-hour ozone budgets for the reasonable further progress (RFP) year of 2008, and the attainment year of 2009. Effective June 15, 2009, USEPA informed NJDEP that the budgets in the SIP revision remained adequate for transportation conformity purposes. The NJDEP budgets for 2009 were found adequate for conformity because they serve to strengthen the SIP through continued progress towards attainment. In accordance with USEPA's Final Rule, the NJTPA is using the 2009 budgets in this conformity determination.

Fine Particulate Matter Emission Budgets

The emissions analysis for PM_{2.5} must consider annual emissions since the NY-NJ-CT PM_{2.5} nonattainment area does not meet the *annual* PM_{2.5} standard. Guidance from USEPA (dated August 10, 2005) presents four possible options for estimating annual emissions for conformity: using a single MOBILE output to represent daily emissions for the entire year; running MOBILE to represent two seasons; running MOBILE to represent four seasons; or running MOBILE to represent 12 individual months. NJTPA utilized the 12 month approach⁷ because NJDEP utilized this approach in the development of the budgets. The PM_{2.5} (PM_{2.5} and NO_x) budgets are given in tons per year (TPY).

The current PM_{2.5} budgets were effective as of June 23, 2006.

Projected Emissions

The projection is the result of the emissions modeling for each horizon year, which includes the set of projects that will be in place by the relevant horizon years (which impacts the amount of pollution that is generated by the transportation system). The increase in transit ridership induced by some smaller transit service enhancements is accounted for via a VMT (off-model) credit applied to the overall VMT estimates. This line contains the modeled emissions of each pollutant for each horizon year. A passing conformity determination is based on whether or not the projected emissions exceed the budget. The projected emissions are given in TPD for ozone and CO, and in TPY for PM_{2.5}.

Finding

This is simply a declarative calculation that identifies whether or not the *projection* exceeds the *budget*. If the emission projection for the relevant horizon year is less than or equal to the budget, the RTP and TIP pass that

⁵ Note that ozone is not a direct emission from automobiles; ozone is the product of a photochemical reaction between volatile organic compounds (VOC) and nitrogen oxides (NO_x). Thus, emissions of these two ozone precursors are measured.

⁶ Note that PM_{2.5} is both a direct emission from automobiles and a byproduct of photochemical reactions including NO_x. Thus, emissions of PM_{2.5} and NO_x are measured. In this analysis, PM_{2.5} emissions include exhaust and brake/tire wear, and exclude road dust.

⁷ In the 12 month approach, PM_{2.5} emissions are estimated for a "typical day" in each month using the MOBILE model. Daily emissions for each month are then multiplied by the number of days in the month, and added together to obtain annual emissions.

specific test. If every horizon year test is satisfied, the RTP and TIP pass for that pollutant. The possible values of this cell are Pass and Fail.

THE MODELING RESULTS

This section presents the results of the emission modeling for each pollutant, and compares the projected emissions to the emission budgets established by the relevant SIPs. If all projected emissions are lower than the emission budgets for each horizon year, the RTP and TIP pass the conformity test.

As presented in Tables 3 and 4, the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 Transportation Improvement Program pass the conformity test, leading to the overall finding that the RTP and TIP satisfy the budget tests for the 8-hour Ozone standard in the NJTPA portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-hour ozone nonattainment areas.

Table 3: VOC Budget Test, 12-County Northern New Jersey Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Areas

	2010	2020	2030	2035
Budget (TPD)	79.00	79.00	79.00	79.00
Projected Emissions (TPD)	74.14	39.36	38.65	40.48
Finding	Pass	Pass	Pass	Pass

Table 4: NO_x Budget Test, 12-County Northern New Jersey Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT 8-Hour Ozone Nonattainment Area

	2010	2020	2030	2035
Budget (TPD)	133.39	133.39	133.39	133.39
Projected Emissions (TPD)	118.71	36.12	26.65	27.26
Finding	Pass	Pass	Pass	Pass

As presented in Tables 5 and 6, the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 Transportation Improvement Program pass each conformity test, leading to the overall finding that the RTP and TIP satisfy the budget tests for the 8-hour Ozone standard in the NJTPA portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-hour ozone nonattainment areas.

Table 5: VOC Budget Test, NJTPA portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-Hour Ozone Nonattainment Areas

	2010	2020	2030	2035
Budget (TPD)	6.45	6.45	6.45	6.45
Projected Emissions (TPD)	6.03	3.19	3.18	3.33
Finding	Pass	Pass	Pass	Pass

Table 6: NO_x Budget Test, NJTPA portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-Hour Ozone Nonattainment Areas

	2010	2020	2030	2035
Budget (TPD)	12.65	12.65	12.65	12.65
Projected Emissions (TPD)	7.49	2.49	2.06	2.13
Finding	Pass	Pass	Pass	Pass

As presented in Tables 7, the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 TIP pass each conformity test, leading to the overall finding that the RTP and TIP satisfy the budget tests for CO in the NJTPA portion of the Northern New Jersey-New York-Long Island CO Maintenance Area.

Table 7. Carbon Monoxide Budget Test, Northern New Jersey Maintenance Areas⁸

	2010	2014 ⁹	2020	2030	2035
Budget (TPD)	1,150	899	899	899	899
Projected Emissions (TPD)	740	690	616	666	670
Finding	Pass	Pass	Pass	Pass	Pass

As presented in Tables 9 and 10, the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 Transportation Improvement Program pass each conformity test, leading to the overall finding that the RTP and TIP satisfy the budget tests for the PM_{2.5} standard in the NJTPA portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT PM_{2.5} nonattainment areas.

Table 8. Direct PM_{2.5} Budget Test, 9-County NJTPA Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Annual PM_{2.5} Nonattainment Areas

	2010	2020	2030	2035
Budget (TPY)	1,207	1,207	1,207	1,207
Projected Emissions (TPY)	819	671	692	718
Finding	Pass	Pass	Pass	Pass

Table 9. NO_x Budget Test, 9-County NJTPA Portion of the New York-Northern New Jersey-Long Island, NY-NJ-CT Annual PM_{2.5} Nonattainment Areas

	2010	2020	2030	2035
Budget (TPY)	61,676	61,676	61,676	61,676
Projected Emissions (TPY)	40,341	12,321	9,259	9,481
Finding	Pass	Pass	Pass	Pass

Figures 6, 7, 8, 9, and 10 are included to convey the trends established by the emission budgets put in place by NJDEP. As shown, the projected emissions generally decrease over time with steep drop-offs from 2010 through 2020, which can be attributed to the introduction of important emission reduction technologies, such as Tier 2 vehicle standards.

However, it is important to observe that these lower projected emissions are not curbing the trend of increasing VMT. As Figure 11 indicates, the downward emission trends have occurred in the face of VMT growth around the region. It is clear that expected advances in emission control technology are allowing the lower emissions, and not changes in travel behavior.

Conclusion (Overall)

The NJTPA has determined that the 2009 Regional Transportation Plan (“Plan 2035”) and the FY 2010-2013 Transportation Improvement Program for northern New Jersey conform to the NJDEP emission budgets. In this document, NJTPA demonstrates that each nonattainment or maintenance area in the region passes the appropriate budget test. Table 10 summarizes the requirements for conformity and NJTPA’s response to each.

The entire NJTPA region is working toward steadily improving air quality, and fully attaining National Ambient Air Quality Standards. This finding reflects positively carrying forward the vision of the NJTPA Regional Transportation Plan and its broad regional goals for improved natural and built environments, a growing economy, and an effective, interconnected, safe and reliable transportation system coordinated with land use.

It is critical that planning officials and residents not allow themselves to become complacent in the face of this news. While advances in vehicle technology may continue and may in fact succeed in offsetting increasing VMT, it is not

⁸Includes Bergen, Essex, Hudson, Passaic and Union counties

⁹ The emissions for the analysis year 2014 are interpolated between 2010 and 2020.

a pattern that can be relied upon indefinitely. It is incumbent upon planners and decision-makers to seek strategies that limit VMT in harmony with initiatives that benefit access and mobility of the region's people and goods. "Smart growth" strategies, that address not only travel patterns but also land use trends and the movement of jobs and residences, have been embraced by the NJTPA to this end, seeking to balance established environmental, economic, social and quality-of-life goals. These strategies are explored more fully in the 2009 Regional Transportation Plan ("Plan 2035").

Figure 6: NO_x and VOC Budgets and Projected Emissions: NJTPA portion of the New York-Northern New Jersey-Long Island 8-Hour Ozone Nonattainment Area: 2010-2035

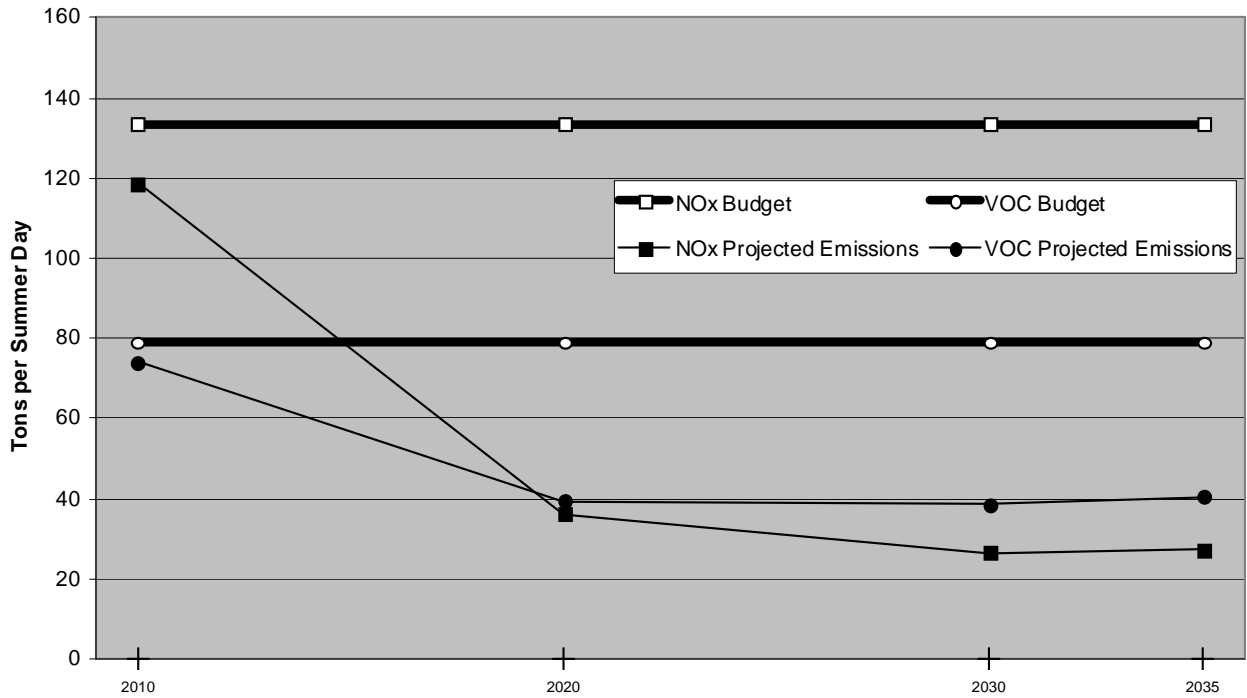


Figure 7: NO_x and VOC Budgets and Projected Emissions for Ocean County, 2010-2035

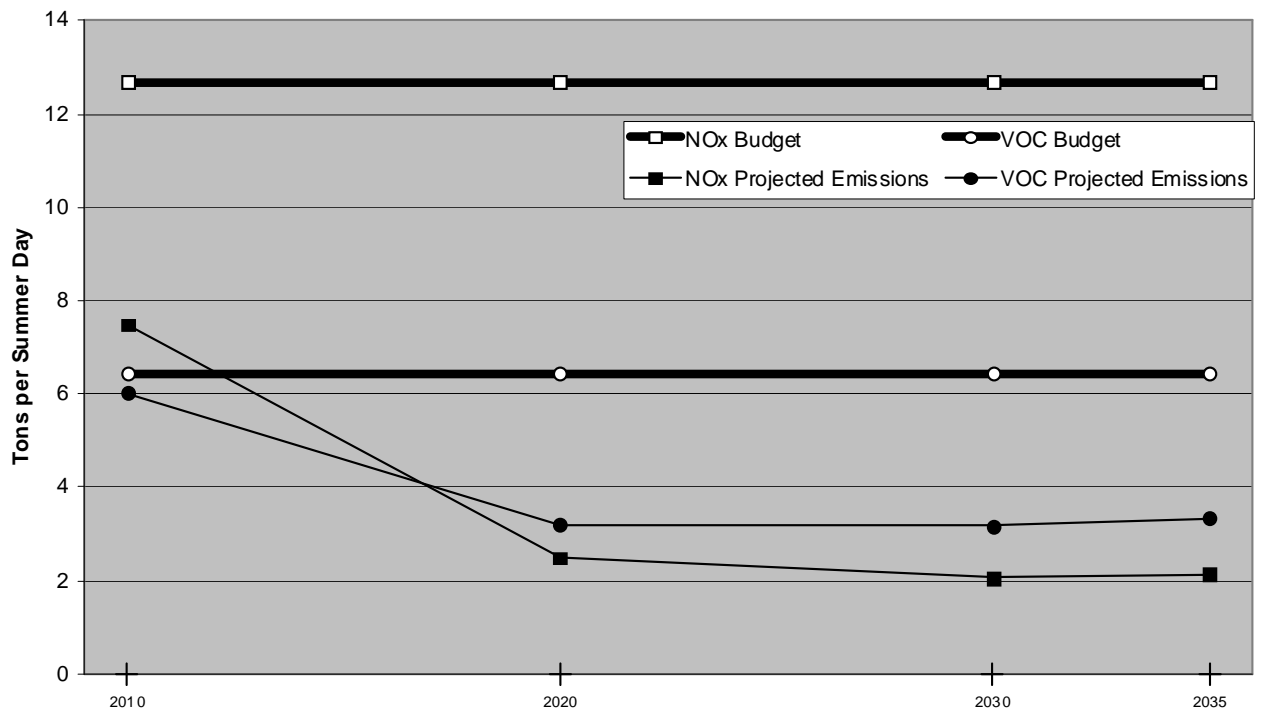


Figure 8: CO Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island Carbon Monoxide Maintenance Area 2010-2035

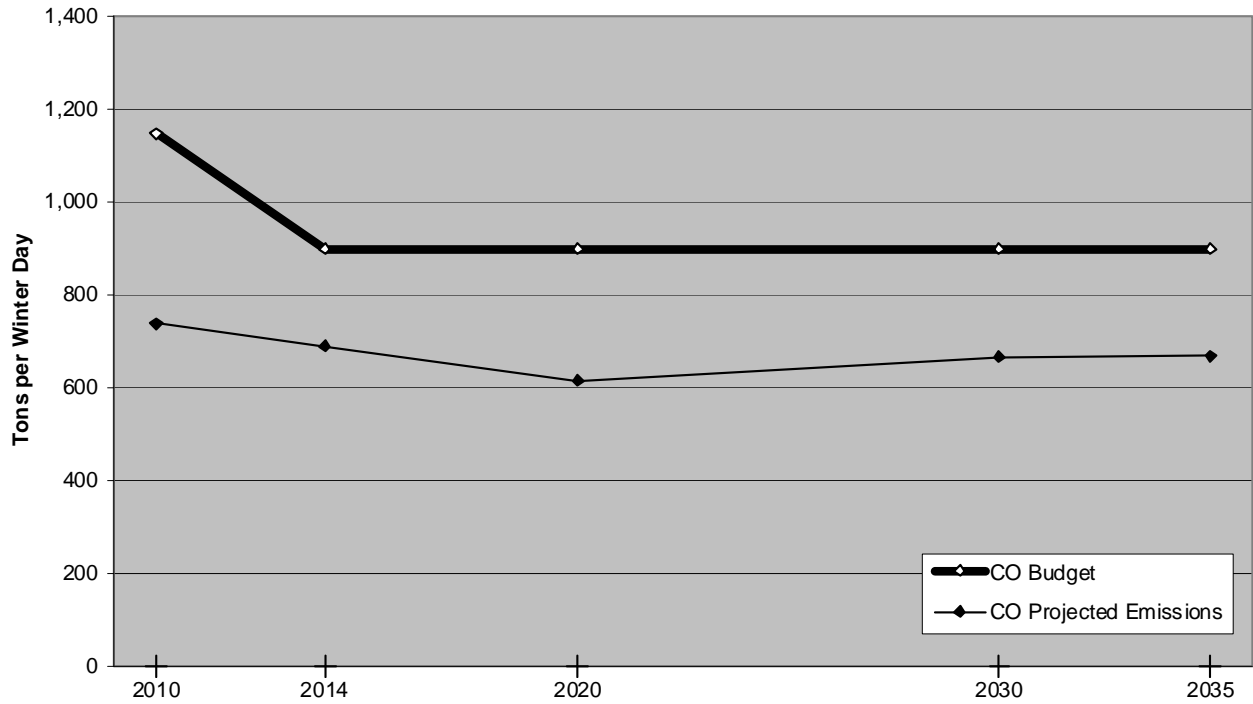


Figure 9: Direct PM_{2.5} Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island PM_{2.5} Nonattainment Area 2009-2035

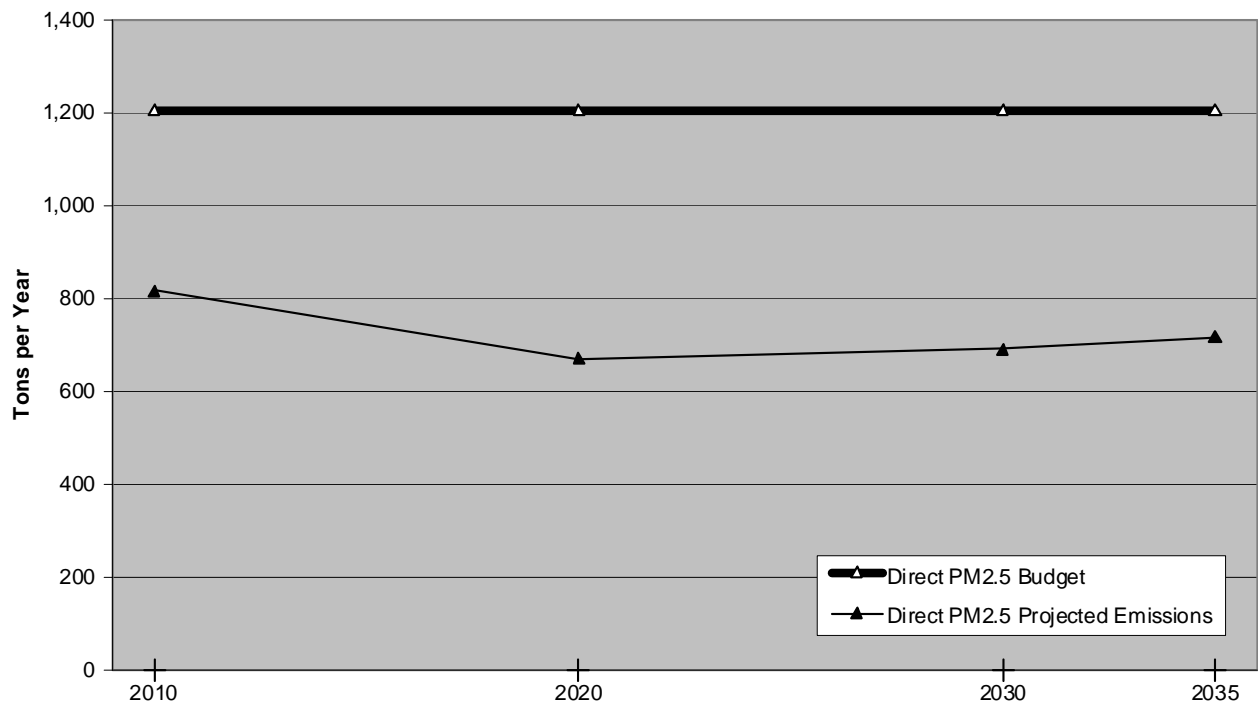


Figure 10: NO_x Budgets and Projected Emissions for NJTPA portion of New York-Northern New Jersey-Long Island PM_{2.5} Nonattainment Area 2010-2035

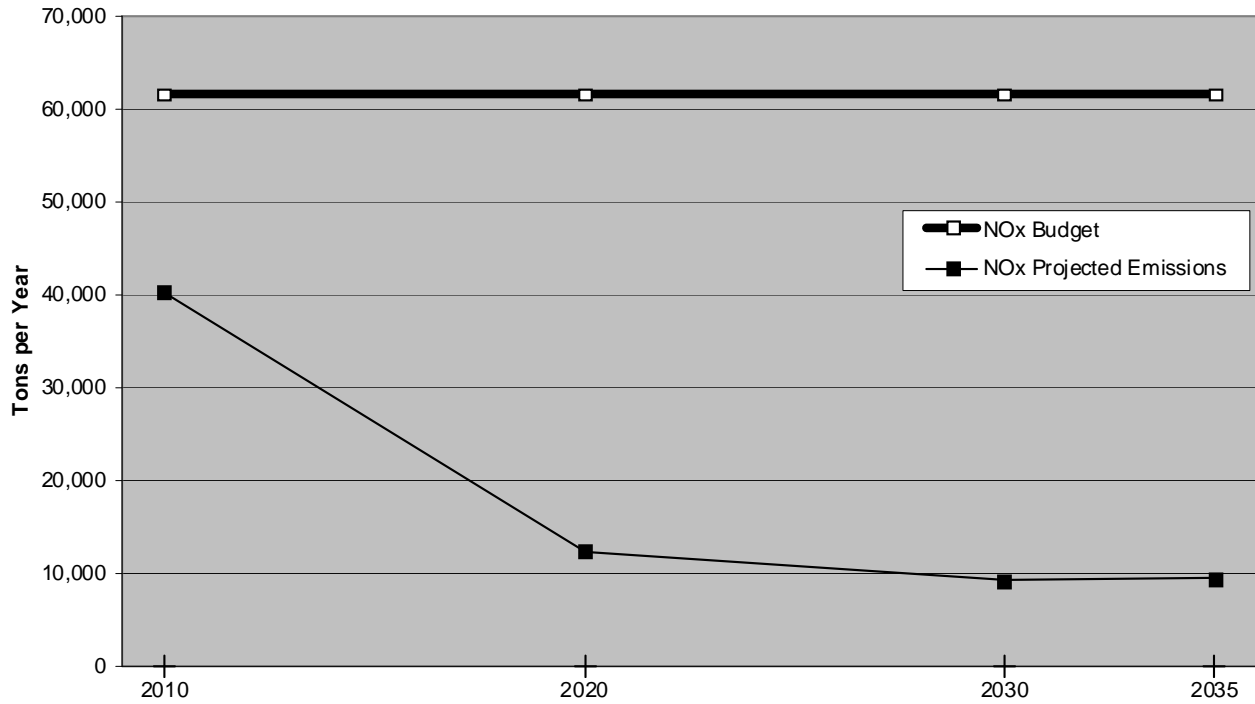


Figure 11: Projected Daily Summer and Winter VMT Growth from 2010 to 2035 in the NJTPA Region

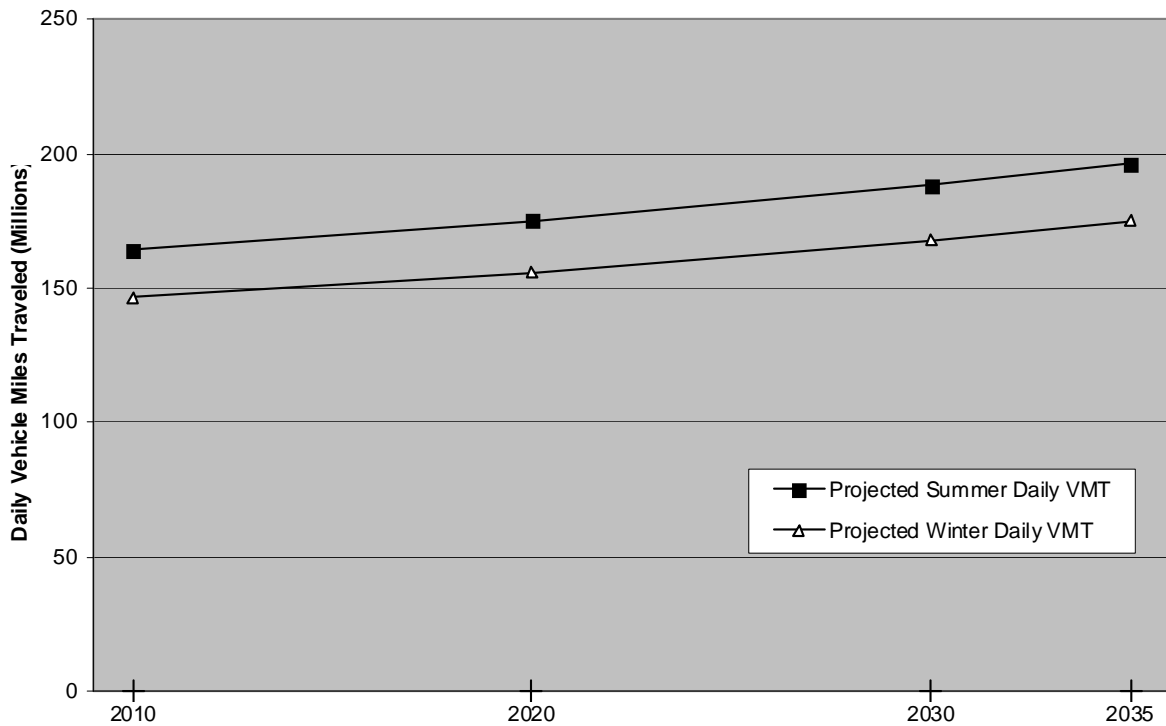


Table 10. Evaluation of the Conformity Determination Criteria

Corresponding 40 CFR Part 93 Section(s)	Evaluation Criteria	NJTPA's Response
§93.106(a) (1)	Are the transportation plan horizon years correct?	Yes. The analysis years of 2010, 2014, 2020, 2030 and 2035 correspond to a near-term year (2010), a year where a budget has been established (2014 – CO), interim years such that no more than 10 years are between analysis years (2020 and 2030), and the Plan horizon year (2035).
§93.106(a) (2)(i)	Does the plan quantify and document the demographic and employment factors influencing transportation demand?	Yes. The Plan 2035 Regional Transportation Plan does quantify and document demographic and employment factors influencing transportation demand.
§93.106(a) (2)(ii)	Is the highway and transit system adequately described in terms of regionally significant additions or modifications to the existing transportation network which the transportation plan envisions to be operational in horizon years?	Yes. The regionally significant additions and modifications to the network utilized in this conformity analysis are listed and described. Detailed information regarding each project can be found in the respective Plan and TIP documents.
§93.108	Are the transportation improvement program and the transportation plan fiscally constrained?	Yes. The Plan and the TIP are constrained to reasonably anticipate financial resources.
§93.109(a)	Has the MPO demonstrated that all applicable criteria and procedures for conformity are complied and satisfied?	Yes. As part of the response, this table itemizing criteria and responses is presented.
§93.109(i)	Are all budget and/or interim emissions test for PM _{2.5} satisfied as required by §93.118 and §93.119 for conformity determination?	Yes. PM _{2.5} emissions are tested using the budget test.
§93.110	Are the conformity determinations based upon the latest planning assumptions?	Yes.
	(a) Is the conformity determination, with respect to all other applicable criteria in §93.111-§93.119, based upon the most recent planning assumptions in force at the time the conformity determination began?	(a) Yes. This conformity determination utilizes the most recent planning assumptions as of February 5, 2009, the start date of this conformity determination process.
	(b) Are the assumptions derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other designated agency? Is the conformity determination based upon the latest assumptions about current and future background concentrations?	(b) Yes. This conformity determination utilizes demographic and employment projections consistent with Plan 2035, which is being developed concurrent to this conformity determination document. Also, the latest available vehicle registration data (developed by NJDEP in July 2007) have been used. The assumptions are derived from the most recent information available to NJTPA.
	(c) Are any changes in the transit operating policies (including fares and service levels) and assumed transit ridership discussed in the determination?	(c) Yes. Applicable transit operating policies and transit ridership are discussed in the “Planning Assumption Requirements” section of this document.
	(d) The conformity determination must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time.	(d) Key transit and toll assumptions are outlined in the “Planning Assumption Requirements” section of this document.
	(e) The conformity determination must use the latest existing information regarding the effectiveness of the transportation control measures [TCMs] and other implementation plan measures that have already been implemented.	Currently, there are no adopted TCMs.

Table 10. Evaluation of the Conformity Determination Criteria

Corresponding 40 CFR Part 93 Section(s)	Evaluation Criteria	NJTPA’s Response
	<i>(f) Key assumptions shall be specified and included in the draft documents and supporting materials used for the interagency and public consultation required by §93.105.</i>	<i>Key assumptions are specified and other supporting documents are included in this conformity determination document, which is available to the public.</i>
§93.111	<i>Is the conformity determination based upon the latest emissions model?</i>	<i>Yes. The transportation conformity determination for the Plan and the TIP is based on use of the MOBILE6.2 emissions model.</i>
§93.112	<i>Did the MPO make the conformity determination according to the consultation procedures of the Final Transportation Conformity Rule or the state’s conformity SIP?</i>	<i>Yes. three meetings of the NJTPA Interagency Consultation Group (NJTPA ICG) were held according to the consultation procedures consistent with the requirements of all applicable regulations including §93.105 (a) and (e).</i>
§93.113(b) §93.113(c)	<i>Are TCMs being implemented in a timely manner?</i>	<i>There are currently no adopted transportation control measures in the SIP.</i>
§93.114	<i>Are there a currently conforming transportation plan and a currently conforming TIP at the time of project approval?</i>	<i>Yes. Conformity has been previously determined on the 2005 RTP (“Access and Mobility 2030”) and the FY 2009-2012 TIP.</i>
§93.115	<i>Are the projects from a conforming Plan and TIP?</i>	<i>Yes. The projects are from the currently conforming TIP and the Plan. The TIP is consistent with the Plan.</i>
§93.118	<i>For Areas with SIP Budgets: Is the Transportation Plan, TIP or Project consistent with the established motor vehicle emissions budget(s) in the applicable SIP?</i>	<i>Yes.</i>
§93.119	<i>For Areas without SIP Budgets: Does the Transportation Plan, TIP or Project satisfy the prescribed interim emissions test?</i>	<i>There are no areas without SIP budgets.</i>
§93.122(a) (1)	<i>Does the conformity analysis include all regionally significant projects?</i>	<i>Yes. The project sets for the TIP and Plan include all regionally significant projects.</i>
§93.122(a) (6) §93.122(a) (7)	<i>Are reasonable methods and factors used for the regional emissions analysis consistent with those used to establish the emissions budget in the applicable implementation plan?</i>	<i>Yes. The ambient temperatures and annual inventory method used in the analysis have been reviewed by the NJTPA ICG, and have been deemed reasonable.</i>
§93.122(b)	<i>Is there a network-based travel model of reasonable methods to estimate traffic speed and delays for the purpose of transportation-related emissions estimates?</i>	<i>Yes. NJTPA uses a network-based model that runs iteratively to obtain convergence on input/output highway and transit travel speed. It is sensitive to travel time, costs, and other factors affecting travel choices.</i>

Appendices¹⁰

1. Final Project List
2. Projects from Prior Years Modeled in Base or Horizon Years
3. Exemption Classification Codes & Names; Definition of Regional Significance
4. VMT (off-model) Credits

Description of Appendices

The appendices to this report list the actual projects that comprise the future transportation system and emissions modeling that are the basis of the conformity determination process. This brief discussion serves as an orientation to the information included in these listings. First, however, it is important to explain what each of the groups of projects represents. Appendix 1 includes the entire FY 2010-2013 TIP Conformity Final Project List. This comprises all projects from the FY 2010-2013 TIP, projects from the NJTPA Project Development Work Program (PDWP), and all regionally-significant non-federally funded projects (“authority projects”). The TIP document itself, which this report accompanies during the public comment process, explains in significant detail how the TIP is generated, reviewed, etc. In addition to projects in the TIP, all projects from the PDWP are included. By definition these PDWP projects are not as far along—as close to construction—as projects in the TIP, but the region anticipates and therefore can address those that are in Preliminary Design in FY 2010 in the conformity modeling. The non-federally funded projects are included as well because of requirements outlined in the Final Transportation Conformity Rule (described earlier). Appendix 2 includes the “existing and committed network,” which is the set of projects that are either existing or expected to be complete through the end of 2009 and included in the emissions model. Obviously this is not a comprehensive list of every project in the network but serves to identify projects that had been classified in previous years and recently completed.

For each project, certain information is provided in Appendix 1. At the top of each section is the “DBNUM” (or *database number*), which is used by NJTPA and its planning partners to identify each project. Listed next to the DBNUM is the “Project Name”, which contains basic information about the project, such as the primary facility in question and the section of that facility, or other important identifiers, such as cross-streets. The next line lists mileposts on the affected facility, if applicable. Below this is a table listing several attributes of the project that relate to the status of the project in the conformity process. The “Project Source” field lists the source of the project: the FY 2010-2013 TIP (TIP-10); FY 2010 PDWP (PDWP-10), or Authority projects (NJ Turnpike, Port Authority of New York and New Jersey, New Jersey Meadowlands Commission, Delaware River Joint Toll Bridge Commission). The “New?” field indicates whether the project is new in this conformity determination (i.e., projects that were in the previous analysis—on the FY 2009-2012 TIP—are indicated as “N” and projects that were not in the previous analysis are indicated as “Y”). Projects that are new to this conformity analysis are listed first in this appendix, followed by projects that were contained in previous conformity determinations. The “Exempt?” column refers to the *Exemption Status* of the project and can have a value of either “Y”, “N”, or “NA”, signifying *yes* (the project is exempt), *no* (the project is not exempt), or *not applicable* (conformity does not apply to this project¹¹). All exempt projects (“Y”) must provide an *Exemption Category* (“Exempt Category”), the value of which is a code taken from the list provided in Appendix 3. These exemptions are defined by the Final Conformity Rule. All non-exempt projects (“N”) must be classified with respect to regional significance. The “Reg Sig?” field allows Yes and No values that indicate whether a non-exempt project is regionally significant. All non-exempt projects must also be assigned a scenario year (“Scenario Yr”) which is based on the first analysis year following the project’s expected completion date. The “Modeled” field indicates whether (and how) the project was modeled. A “Y” indicates that the project was coded in the NJRTME travel demand model; a “V” indicates that VMT credits were taken for this project, and an “N” indicates that this project was not able to be modeled. Note that some of the exempt projects have been modeled, even though they need not be, in order to make the travel demand model as complete as possible. Finally, the text below the table is a more detailed description of the project.

Appendix 4 is a summary of the VMT (off-model) credits included in this year’s emissions analysis.

This entire report, as well as the associated appendices, can also be accessed on the NJTPA website: www.njtpa.org, or by contacting Liz DeRuchie at: (973)-639-8446, or email: liz@njtpa.org.

¹⁰ Due to their volume, the appendices have not been included in the printed document packet. However, anyone interested in reviewing them can contact Liz DeRuchie (as indicated above), or obtain them via the website.

¹¹ Some projects, in particular projects dealing solely with rail freight movements, are not subject to transportation conformity requirements because they are not considered to be transportation projects (highway or transit projects) as defined in the Transportation Conformity regulations (40 CFR Section 93).