The State of New Jersey
Department of Environmental Protection

State Implementation Plan (SIP) Revisions

75 ppb 8-Hour Ozone National Ambient Air Quality Standard
Reasonably Available Control Technology (RACT) Determination,

2011 Periodic Emission Inventory,

and

8-Hour Carbon Monoxide National Ambient Air Quality Standard
Maintenance and Monitoring Plan

Proposed
July 2014

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* **NOTE:** These appendices are only available electronically

Acronyms and Abbreviations

ACT	Alternative Control Techniques
AEL	Alternative Emission Limit
ACP	Alternative Control Plan
AERR	Air Emissions Reporting Requirements
CERR	Consolidated Emission Reporting Rule
CFR	Code of Federal Regulations
CM	Control Measure
CO	Carbon Monoxide
CTG	Control Techniques Guideline
EGU	Electric Generating Unit
FCCU	Fluid Catalytic Cracking Unit
FMVCP	Federal Motor Vehicle Control Program
FR	Federal Register
FSEL	Facility Specific Emission Limit
HEDD	High Electric Demand Day
ICE	Internal Combustion Engine
ICI	Industrial, Commercial and Institutional
I/M	Inspection and Maintenance
MACT	Maximum Achievable Control Technology
MSW	Municipal Solid Waste
MTBE	Methyl-tertiary-butyl ether
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NG	Natural Gas
NH_3	Ammonia
NJ	State of New Jersey
NJDEP	New Jersey Department of Environmental Protection
NJEMS	New Jersey Environmental Management System
NO_x	Oxides of Nitrogen
NSPS	New Source Performance Standards
O_3	Ozone
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
PM10	Particulate Matter less than 10 micrometers in diameter
PM2.5	Particulate Matter less than 2.5 micrometers in diameter
ppb	Parts Per Billion
ppm	Parts Per Million
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
RICE	Reciprocating Internal Combustion Engine
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TCM	Transportation Control Measure
tpy	Tons Per Year
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

Executive Summary

This document contains the following proposed revisions to the New Jersey State Implementation Plan (SIP) for Air Quality in accordance with the Federal Clean Air Act requirements for attainment and maintenance of the National Ambient Air Quality Standards:

- Reasonably Available Control Technology (RACT) Determination for the 75 ppb 8-hour 2008 Ozone National Ambient Air Quality Standards;
- 2011 Periodic Emission Inventory;
- Carbon Monoxide Maintenance Plan for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Maintenance Area (or Northeastern carbon monoxide maintenance area); and
- Changes to the air monitoring network for carbon monoxide.

Reasonably Available Control Technology (RACT) Requirements for the 75 ppb 8-Hour Ozone National Ambient Air Quality Standard

The State of New Jersey is proposing revisions to the SIP to address Reasonably Available Control Technology (RACT) requirements under part D of the Clean Air Act for the 75ppb 8-hour 2008 ozone National Ambient Air Quality Standards. Reasonably Available Control Technology (RACT) is defined by the United States Environmental Protection Agency (USEPA) as the lowest emission limitation that a source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.[1] The Ozone Transport Region states, including New Jersey, are required to submit RACT SIPs to the USEPA to help attain the 75 ppb ozone standard.[2] RACT SIP requirements include revised RACT rules, certifications where appropriate that existing rule provisions continue to be RACT, or negative declarations that there are no sources covered by a specific USEPA Control Techniques Guideline (CTG) source category.[3]

The air pollutants most important in the formation of ozone are volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). States in the Ozone Transport Region, including New Jersey, are required to update RACT rules for all existing VOC sources covered by a CTG, and for all other major sources of VOC and NO_x, including those covered by an Alternative Control Techniques (ACT).[4] The major source threshold of VOC and NO_x is 25 tons per year (tpy) each for the purposes of major source RACT applicability in New Jersey.

This proposed RACT SIP revision for the 75 ppb ozone standard includes an evaluation of the State's major VOC and NO_x source categories. This was done by searching the New Jersey Environmental Management System (NJEMS) permitting and emission inventory database, comparing the existing New Jersey RACT rules with the USEPA CTGs and ACTs, and evaluating other states' regulations that may be more stringent.
This proposed RACT SIP revision consists of:

1) Certifications that most existing RACT limits continue to be RACT for applicable CTG sources, ACT sources, and VOC and NO_x non-CTG/ACT major sources;

2) Negative declarations that RACT rules are not required for CTGs for which there are no

[1] 44 FR 53762, September 17, 1979
[2] Clean Air Act 42 U.S.C. §7511c (Section 184)
[3] 78 FR 34178, June 6, 2013
[4] Clean Air Act 42 U.S.C. §7511c (Section 184)

sources in New Jersey;

3) A recommendation that the USEPA finalize the June 6, 2013 75 ppb Ozone Implementation Rule[5] to include more stringent RACT emission limits approved in other state SIPs as presumptive RACT, and that any RACT SIP revisions submitted before the adoption of the proposed 75 ppb Ozone Implementation Rule be reviewed by USEPA based on the rule proposal; and

4) Commitments to adopt, subject to public notice and comment, four CTGs if determined to be more effective than current New Jersey requirements, and to consider further limiting NO_x emissions from natural gas compressor engines and turbines, which are major sources of NO_x, subject of two USEPA ACTs. Table E1 lists the source categories, USEPA guidance, and the corresponding affected State rules for which more stringent revisions would be proposed if appropriate in 2014.

Table E1. Summary of New Jersey Source Categories and Potential Rule Revisions

Source Category	Targeted Pollutants		Affected NJ Rules
	VOC	NO_x	
Control Techniques Guidelines			
1.Industrial Cleaning Solvents	X		N.J.A.C. 7:27-16
2. Paper, Film and Foil Coatings	X		N.J.A.C. 7:27-16.7
3. Fiberglass Boat Manufacturing Materials	X		N.J.A.C. 7:27-16
4. Misc. Metal and Plastic Parts Coatings	X		N.J.A.C. 7:27-16.7
Alternative Techniques Guideline (ACT)			
1.Stationary Reciprocating Internal Combustion Engines		X	N.J.A.C. 7:27-19.8
2. Stationary Gas Turbines		X	N.J.A.C. 7:27-19.5

N.J.A.C. 7:27-16 & N.J.A.C. 7:27-19 establish RACT requirements concerning the control of air pollution by VOCs and NO_x, respectively. Subchapter 16, Control and Prohibition of Air Pollution by Volatile Organic Compounds, and Subchapter 19, Control and Prohibition of Air Pollution of Oxides of Nitrogen, are commonly referred to as the State's VOC RACT and NO_x RACT rules. On March 20, 2009, New Jersey adopted new rules and amendments for 14 source categories. These rules fulfilled New Jersey's commitment to implement RACT to help attain the 85 ppb 8-hour 1997 ozone standard.[6] The USEPA approved the rules as a revision to

[5] 78 FR 34178, June 6, 2013
[6] http://www.nj.gov/dep/baqp/8hrsip/8hrsip.html#final

New Jersey's SIP on August 2, 2010.[7] These rules were also adopted to make progress to achieve the 75 ppb 8-hour 2008 ozone standard. The rule provisions for the 14 source categories continue to be RACT for the 75 ppb ozone standard. The source categories in Table E1 were not included in the 2009 RACT rule revision.

On June 11, 2014, the Ozone Transport Commission adopted a Statement of Reasonably Available Control Technology Principles. The existing New Jersey RACT rules were considered in the development of these principles and the sources in New Jersey meet these principles.

2011 Emission Inventory

This proposed SIP revision includes New Jersey's 2011 Periodic Emission Inventory. This inventory is a compilation of the emission estimates from sources of anthropogenic (human-made) and biogenic (naturally occurring) volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 2.5 micrometers and 10 micrometers in diameter (PM2.5 and PM10), sulfur dioxide (SO_2) and ammonia (NH_3) in the outdoor air. The sources are divided into five sectors, with each making up one component of the inventory: point sources (large stationary), area sources (small stationary), onroad mobile sources, nonroad (off road) mobile sources and biogenic (naturally occurring) sources.

Figures ES-1 through ES-6 show the 2011 emission inventory and inventory trends from 2002 to 2011, from human-made sources.

As can be seen in Figures ES-1 through ES-6, estimated human-made emissions of VOCs decreased from 2002 to 2011 by about 40%, NO_x decreased by about 40%, PM2.5 decreased by about 20%, SO_2 decreased by about 80%, carbon monoxide decreased by about 50%, and ammonia decreased by about 35%. These decreases were primarily due to State and Federal rules, such as the NO_x budget program for power plants, power plant and refinery consent decrees, New Jersey's high electric demand day and multi-pollutant power plant rules, Federal new engine standards for onroad and nonroad vehicles and equipment, National and State low emission vehicle programs, and area source rules such as consumer products, portable fuel containers, paints, autobody refinishing, asphalt paving applications, and solvent cleaning operations.

In the 2011 emission inventory, biogenics represent the largest fraction of VOCs. The area source sector represents the largest fraction of human-made VOC, followed by the nonroad mobile sector. The onroad mobile sector represents the largest fraction of NO_x, followed by the nonroad mobile sector. The nonroad mobile sector represents the largest fraction of carbon monoxide, followed by the onroad mobile sector. The area source sector represents the largest fraction of PM2.5. The area source sector represents the largest fraction of SO_2, followed by the point source sector. Biogenics represent the largest fraction of ammonia, while the area source sector represents the largest fraction of human-made ammonia.

[7] 75 FR 45483, August 3, 2010

Figure ES-1
New Jersey Statewide Volatile Organic Compound Emission Trend

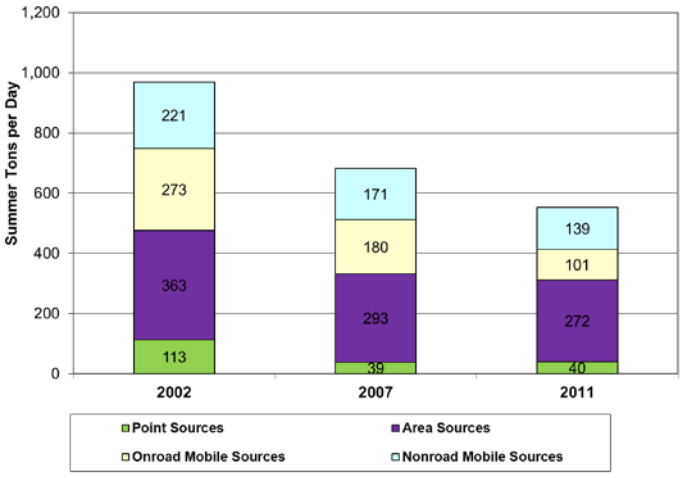


Figure ES-2
New Jersey Statewide Oxides of Nitrogen Emission Trend

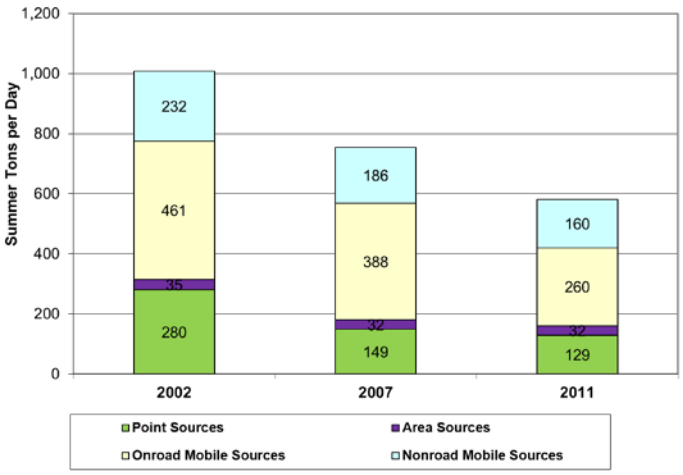


Figure ES-3
New Jersey Statewide Carbon Monoxide Emission Trend

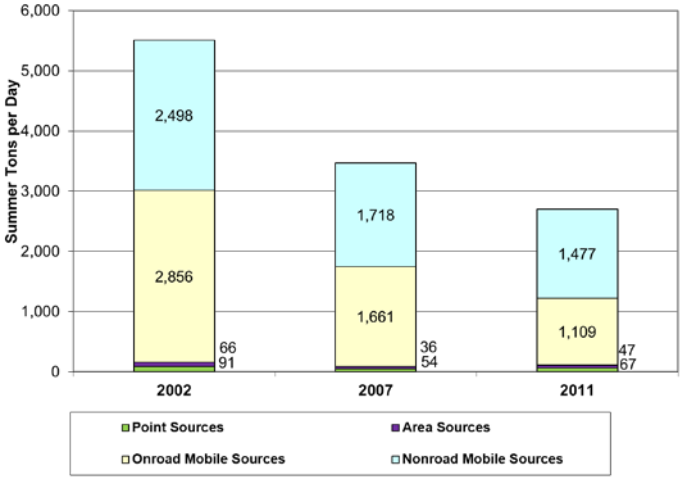


Figure ES-4
New Jersey Statewide Fine Particulate Matter Emission Trend

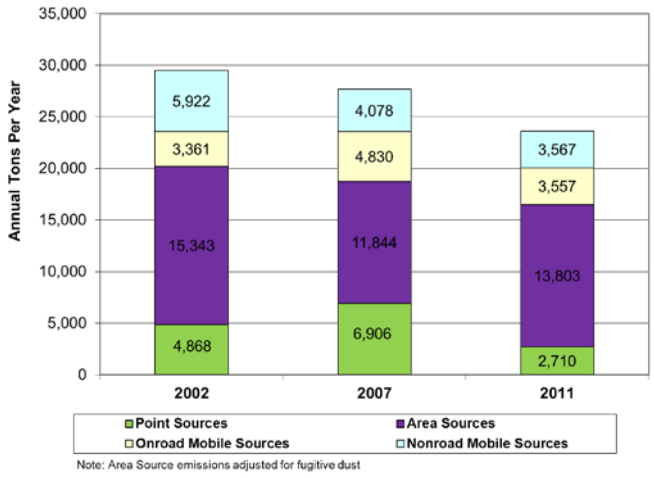


Figure ES-5
New Jersey Statewide Sulfur Dioxide Emission Trend

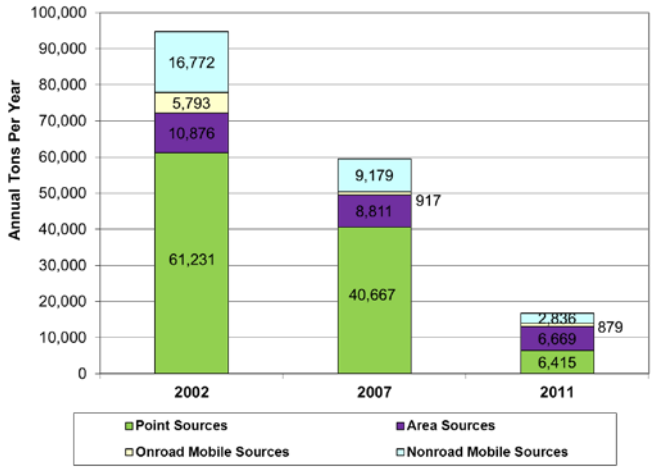
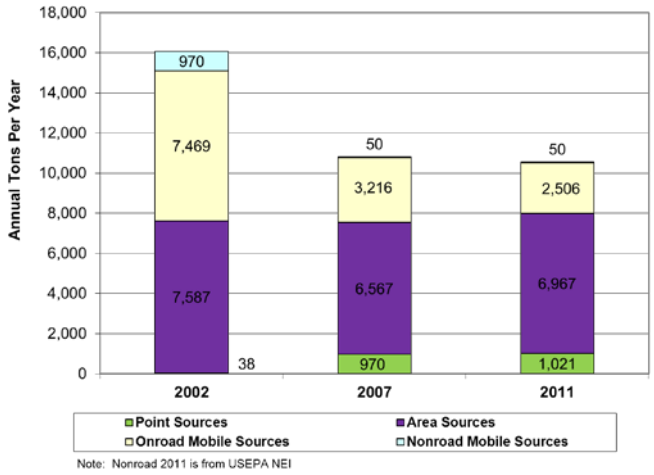


Figure ES-6
New Jersey Statewide Ammonia Emission Trend



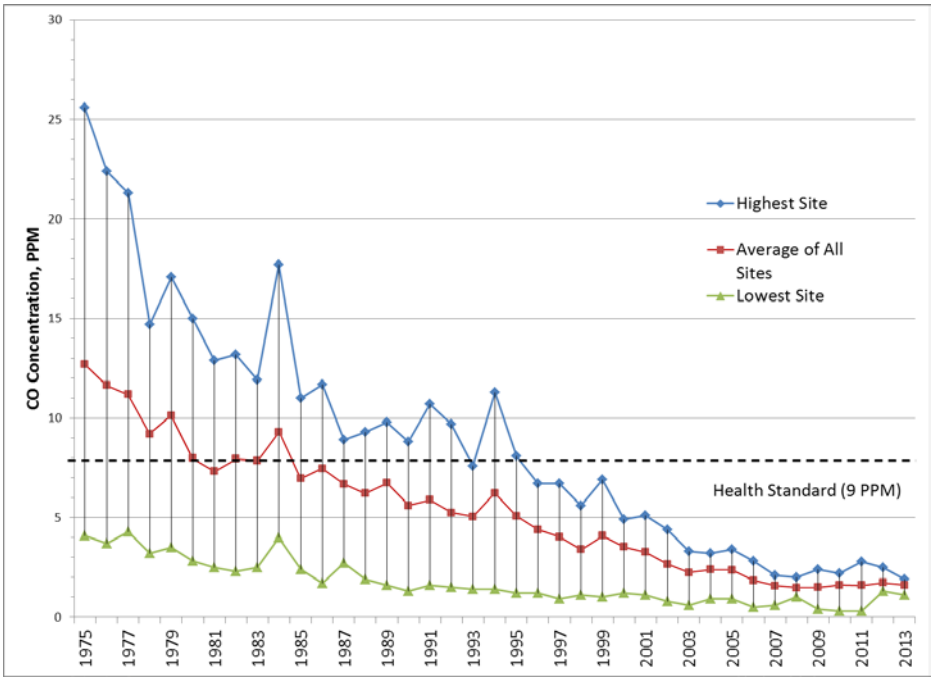
Carbon Monoxide

This proposed portion of this SIP revision contains a carbon monoxide maintenance and monitoring plan. The Clean Air Act requires that eight years after redesignation of any area as an attainment area states submit an additional revision of the SIP for maintaining the National Ambient Air Quality Standard for the ten years beyond the initial ten-year maintenance period. The second ten year plan is required by the Clean Air Act to ensure continued compliance with the air quality standards. The first ten-year maintenance plan for the Northeastern carbon monoxide maintenance area runs through December 31, 2014.[8] New Jersey is including in this proposed SIP revision the second ten-year maintenance plan that will cover the period from 2015 to 2024. New Jersey is far below the existing standards for this pollutant and, therefore, qualifies for a limited maintenance plan submittal.

The last time the carbon monoxide concentrations in New Jersey exceeded the 1-hour standard of 35 parts per million (ppm) was in the late 1970s. Typical 1-hour maximum concentrations in New Jersey in recent years were less than 7 parts per million, well below the standard.

The last exceedance of the 8-hour carbon monoxide standard of 9 ppm was in 1995. Typical 8-hour carbon monoxide levels are less than 2 ppm. Figure ES-7 shows the carbon monoxide monitoring values trend.

Figure ES-7
Carbon Monoxide Monitoring Trend in New Jersey, 1975-2013
Second Highest 8-Hour Values



[8] 71 FR 38772, July 10, 2006

In this proposed SIP revision, New Jersey is committing to a continuation of existing air pollution control programs relevant to carbon monoxide, including Prevention of Significant Deterioration (PSD) permitting, an inspection and maintenance program, vehicle idling enforcement and working with the Metropolitan Planning Organizations. New Jersey will continue to monitor for carbon monoxide in the outdoor air in accordance with State and Federal requirements.

This proposed SIP revision also summarizes the carbon monoxide monitoring plan changes. To use its resources more prudently, and because of the low concentrations and downward carbon monoxide trend, the State has ceased monitoring for carbon monoxide in Burlington, Freehold, Morristown and Perth Amboy. The State will continue monitoring for carbon monoxide at the nearby Camden and Elizabeth Lab sites. The State will use the Camden carbon monoxide data as a surrogate for Burlington and will use the Elizabeth Lab carbon monoxide data as a surrogate for Freehold, Morristown, and Perth Amboy. Any future changes to the air monitoring network will be made through the air monitoring network review process. This review process undergoes a public notice period, usually in the May- June time period each year, and then is subject to approval by the USEPA.

I. Introduction

The Clean Air Act, 42 U.S.C. §7401 et seq. (Section 101) requires all areas of the nation to attain and maintain compliance with the health based National Ambient Air Quality Standards. These standards are designed to protect public health and welfare from specific pollutants, known as criteria pollutants. This document contains the following proposed revisions to the New Jersey State Implementation Plan (SIP) for Air Quality in accordance with the Federal Clean Air Act Requirements for attainment and maintenance of the National Ambient Air Quality Standards:

- Ozone Reasonably Available Control Technology (RACT) Determination;
- 2011 Periodic Emission Inventory;
- Carbon Monoxide Limited Maintenance Plan for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Maintenance Area (or Northeastern carbon monoxide maintenance area); This second ten-year maintenance plan will cover the period from January 1, 2015 – December 31, 2024; and
- Changes to the air monitoring network for carbon monoxide.

A. Ozone

On March 12, 2008[9], the USEPA revised the National Ambient Air Quality Standard for ozone to 75 parts per billion (ppb). On May 21, 2012, the USEPA formally designated all New Jersey counties as nonattainment[10] and classified them as marginal[11] for the 75 ppb ozone standard. Based on this classification, New Jersey is required to submit a periodic emission inventory for ozone precursors (volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide). In addition, the Clean Air Act 42 U.S.C. §7511c(b) (Section 184(c)(b)) requires states in the Ozone Transport Region to update Reasonably Available Control Technology (RACT) plans and requirements. Both of these requirements are met in this proposed SIP revision. The nonattainment areas for 8-hour ozone in which New Jersey is a part are shown in Figure I-1.

B. Inventory

The Clean Air Act 42 U.S.C. § 7410(a)(2)(F) (Section 110 (a)(2)(F)) requires the submission of periodic reports on the nature and amounts of emissions from pollutants with a National Ambient Air Quality Standard and emissions related data. The Clean Air Act 42 U.S.C. §§ 7511(a)(1), 7511(a)(3) and 7502(c)(3) (Sections 182(a)1, 182(a)(3) and 172(c)(3)) require that states submit periodic emission inventories every three years for marginal and above nonattainment areas in accordance with USEPA guidance. This proposed SIP revision includes the 2011 emission inventory. The 2011 emission inventory is expected to be used by USEPA and states for planning, policy and rule development, modeling, national ambient air quality standard and regional haze compliance.

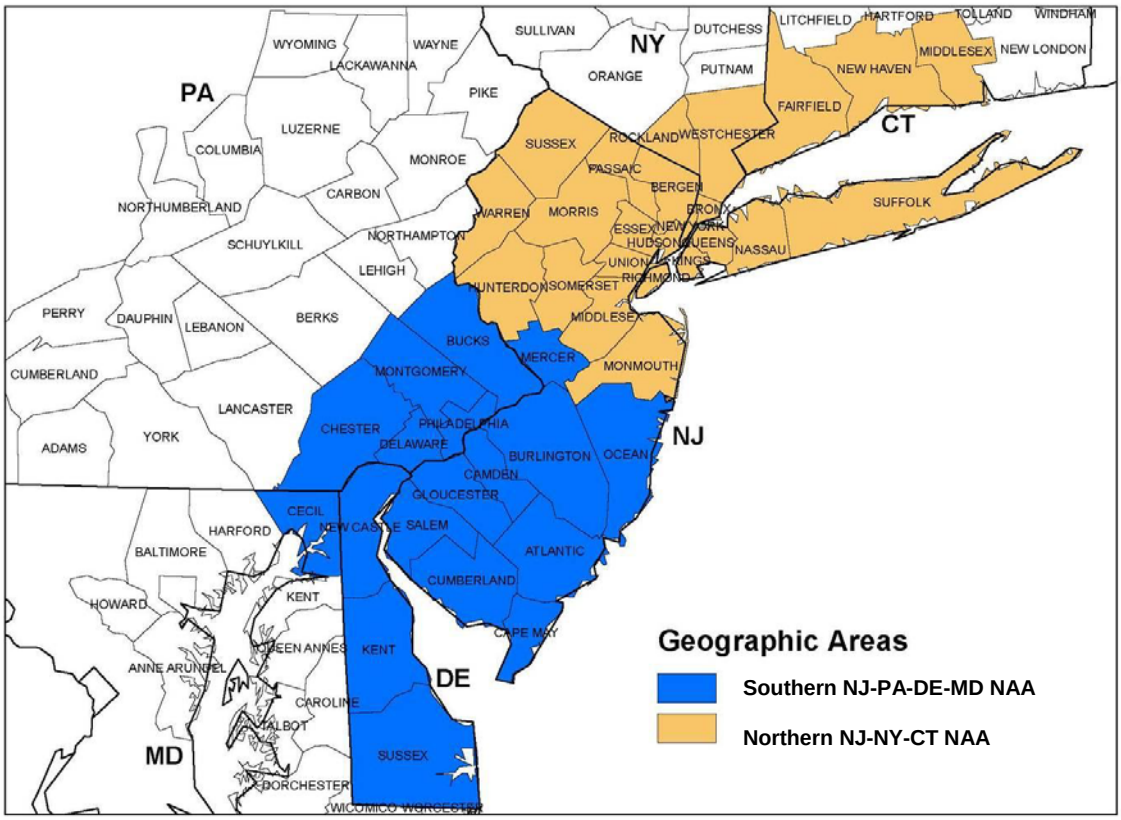
C. Carbon Monoxide

The Clean Air Act 42 U.S.C. §7505a (Section 175A) requires that, eight years after redesignation of any area as an attainment area, states submit an additional revision of the SIP for maintaining the National Ambient Air Quality Standard for another ten years. New Jersey is

[9] 73 FR 16436, March 12, 2008.
[10] 77 FR 30088, May 21, 2012.
[11] 77 FR 30160, May 21, 2012.

proposing in this SIP revision a second ten-year limited maintenance plan that will cover the period from 2015 to 2024.

Figure I-1: New Jersey 8-Hour Ozone Nonattainment Areas (NAA)



II. Reasonably Available Control Technology (RACT) Requirements for the 75 ppb 8-Hour Ozone National Ambient Air Quality Standard

The air pollutants most important in the formation of ozone are volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for each ozone National Ambient Air Quality Standard. The Clean Air Act 42 U.S.C. §§7511c(b)(1) and 7511c(b)(2) (Sections 184(b)(1) and 184(b)(2)) requires states in the Ozone Transport Region, including New Jersey, to adopt Reasonably Available Control Technology (RACT) for all existing VOC and NO_x source categories covered by a Control Techniques Guideline (CTG), and for all other major sources of VOC and NO_x, including those covered by an Alternative Control Techniques (ACT)[12] The major source threshold of VOC and NO_x is 25 tons per year (tpy) each for the purposes of RACT applicability in New Jersey.

RACT is defined by the USEPA as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.[13] RACT State Implementation Plan (SIP) requirements that must be addressed include revised RACT rules, certifications where appropriate that existing rule provisions continue to be RACT, and negative declarations that there are no sources covered by a specific CTG source category.[14] States should provide for implementation of RACT as expeditiously as possible to help attain the 75 ppb ozone National Ambient Air Quality Standard.[15]

This proposed RACT SIP revision includes: certification that RACT is, or will be, required for VOC CTG source categories; VOC and NO_x ACT sources; and VOC and NO_x non-CTG/ACT major sources. Negative declarations are included for CTGs for which there are no sources in New Jersey. Also included are commitments to adopt, subject to public notice and comment, CTGs, if determined to be more effective than current New Jersey requirements, and to consider amendments to N.J.A.C. 7:27-19 to further limit NO_x emissions from natural gas compressor engines and turbines, which are major sources of NO_x.

A. Background

On March 20, 2009, New Jersey adopted new rules and amendments at N.J.A.C. 7:27-16, Control and Prohibition of Air Pollution by Volatile Organic Compounds, and N.J.A.C. 7:27-19, Control and Prohibition of Air Pollution by Oxides of Nitrogen, for 14 source categories. These rules fulfilled New Jersey's commitment to implement RACT to help attain the 85 ppb ozone National Ambient Air Quality Standard.[16] The USEPA approved the rules as a revision to New Jersey's SIP on August 2, 2010.[17] These rules were also adopted to make progress towards achieving the 75 ppb ozone National Ambient Air Quality Standard. The rule requirements for the 14 source categories continue to be RACT for the 75 ppb ozone standard. The adopted RACT rule categories are listed in Table II-1:

[12] 78 FR 34192, June 6, 2013
[13] 44 FR 53762, September 17, 1979
[14] 78 FR 34192, June 6, 2013
[15] Ibid.
[16] http://www.nj.gov/dep/baqp/8hrsip/8hrsip.html#final
[17] 75 FR 45483, August 3, 2010

Table II-1. Summary of New Jersey Source Categories and Amended RACT Rules

Source Category	Applicable Rule Section
Subchapter 16 Control and Prohibition of Air Pollution by Volatile Organic Compounds (VOC)	
1. VOC stationary storage tanks	N.J.A.C. 7:27-16.2
2. Flat wood paneling	N.J.A.C. 7:27-16.7
3. Flexible package printing	N.J.A.C. 7:27-16.7
4. Offset lithographic printing and letterpress printing	N.J.A.C. 7:27-16.7
5. Alternative VOC control requirements	N.J.A.C. 7:27-16.17
6. Application of cutback and emulsified asphalts	N.J.A.C. 7:27-16.19
Subchapter 19 Control and Prohibition of Air Pollution by Oxides of Nitrogen (NO_x)	
7. Boilers serving electric generating units (EGUs)	N.J.A.C. 7:27-19.4
8. Stationary combustion turbines	N.J.A.C. 7:27-19.5
9. Industrial/commercial/institutional (ICI) boilers and other indirect heat exchangers	N.J.A.C. 7:27-19.7
10. Asphalt pavement production plants	N.J.A.C. 7:27-19.9
11. Glass manufacturing furnaces	N.J.A.C. 7:27-19.10
12. Municipal solid waste (MSW) incinerators	N.J.A.C. 7:27-19.12
13. Alternative and facility-specific NO_x emission limits	N.J.A.C. 7:27-19.13
14. Sewage sludge incinerators	N.J.A.C. 7:27-19.28

B. Reasonably Available Control Technology Determination of Major Sources of VOC and NOx in New Jersey

This proposed Reasonably Available Control Technology (RACT) SIP revision for the 75 ppb ozone National Ambient Air Quality Standard includes a RACT evaluation of the State's major sources. This was done by researching the New Jersey Environmental Management System (NJEMS) permitting and emission inventory database, comparing the existing New Jersey RACT rules with the USEPA CTGs and ACTs, and evaluating other states' regulations that may be more stringent. For most categories, previously adopted RACT limits in New Jersey continue to be RACT for 75 ppb ozone National Ambient Air Quality Standard implementation purposes.

i. Control Techniques Guidelines and Alternative Control Techniques

States within the Ozone Transport Region must require RACT for all source categories of VOC covered by a Control Techniques Guidelines (CTG), and for all other major sources of VOC and NO_x.[18] The CTGs were developed by the USEPA to help states identify VOC RACT requirements for certain source categories, and are considered presumptive RACT.[19] There are no CTGs for NO_x sources.

The USEPA also issued technical documents which identify controls for certain categories of stationary sources of NO_x and VOC. Known as Alternative Control Techniques (ACTs), these documents describe available control techniques and their cost effectiveness, but do not define presumptive RACT levels as the CTGs do.[20] These are to assist states in evaluating RACT for select sources of NO_x or VOC not covered by a CTG.

New Jersey amended N.J.A.C. 7:27-16 and N.J.A.C. 7:27-19 in March 20, 2009, to update RACT for the following CTG/ACT categories:

1. External Floating Roof Tanks [N.J.A.C. 7:27-16.2];
2. Offset Lithographic Printing and Letterpress Printing [N.J.A.C. 7:27-16.7]
3. Flexible Package Printing [N.J.A.C. 7:27-16.7]
4. Flat Wood Paneling Coatings [N.J.A.C. 7:27-16.7]
5. Cutback Asphalt [N.J.A.C. 7:27-16.19];
6. Utility Boilers [N.J.A.C. 7:27-19.4];
7. Stationary Gas Turbines [N.J.A.C. 7:27-19.5];
8. ICI Boilers and Process Heaters [N.J.A.C. 7:27-19.7];
9. Glass Manufacturing [N.J.A.C. 7:27-19.10];

In determining if these RACT rule revisions still represent RACT for the 75 ppb ozone standard, New Jersey reevaluated the most recent RACT analysis dated August 1, 2007,[21] and reviewed the applicable rules compiled in N.J.A.C. 7:27-16 and 19. Table II-2 lists all the CTG and ACT documents[22] and identifies the rules adopted by the State and approved by the USEPA.

Table II-2 also indicates if New Jersey has determined that previously adopted RACT controls still represent RACT for the 75 ppb ozone standard, or whether the State intends to propose more up-to-date controls and lower allowable emission rates subject to public comment. For many sources, the 2009 New Jersey rules go beyond the recommendations contained in the CTG/ACT documents in terms of more stringent emission rates and lower thresholds of applicability.[23, 24] This is in part attributed to the State's fulfillment of its commitment to adopt rulemakings consistent with OTC guidelines,[25] and New Jersey's 2009 goal to make progress to achieve the 75 ppb ozone standard as well as achieve the 85 ppb ozone standard. A "Y" in the RACT column indicates that the New Jersey Department of Environmental Protection (NJDEP)

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[18] 78 FR 34192, June 6, 2013
[19] 78 FR 34192, June 6, 2013
[20] Ibid.
[21] http://www.nj.gov/dep/baqp/sip/8-hrRACT-Final.pdf
[22] http://www.epa.gov/ttn/caaa/t1/memoranda/ractqanda.pdf
[23] Beyond Volatile Organic Compound-Reasonably Available Control Technology-Control Technology Guidelines Requirements, EPA-453/R-95-010, April 1995.
[24] http://www.epa.gov/air/pdfs/MenuOfControlMeasures.pdf
[25] http://www.otcair.org/upload/Documents/Formal%20Actions/RES%2006-02_Concerning%20Coordination%20and%20Implementation%20of%20Control%20Strategies_061115.pdf

has determined that currently effective emission limits for that particular source category still represents RACT in 2014, for the 75 ppb ozone standard.

To better understand the results of the NJDEP's CTG/ACT evaluation, the following is a list of acronyms used in summarizing the results shown in Table II-2.

- Y indicates that rules were adopted by the State, approved by USEPA, or that previously adopted RACT controls still represent RACT;
- Pend. indicates that RACT is being further evaluated and rule revisions may be proposed;
- N indicates that rules have not yet been adopted;
- NS indicates no sources;
- NA indicates not applicable because CTG is superseded; and
- NR indicates National rule was issued after the CTG/ACT.

Table II-2. RACT Certifications Based on Existing USEPA Guidance

a. List of the USEPA's Control Techniques Guidelines (CTG) for Control of VOC Emissions from Stationary Sources

Pre 1990 CTG Documents	Rules Adopted by NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
Group 1				
1. Stage I Vapor Control Systems	Y	Y	16.3	Y
2. Surface Coating of Cans	Y	Y	16.7	Y
3. Surface Coating Metal Coils	Y	Y	16.7	Y
4. Surface Coating Paper Products	Y	Y	16.7	Y
5. Surface Coating Fabrics	Y	Y	16.7	Y
6. Surface Coating Auto/Light trucks	Y	Y	16.7	NA
7. Misc. Refinery Sources	Y	Y	16.6	Y
8. Solvent Metal Cleaning	Y	Y	16.6	Y
9. Gasoline Loading Terminals	Y	Y	16.3	Y
10. Surface Coating Metal Furniture	Y	Y	16.7	NA
11. Surface Coating Magnet Wire	Y	Y	16.7	Y
12. Surface Coating Large Appliances	Y	Y	16.7	NA
13. Bulk Gasoline Plants	Y	Y	16.3	Y
14. Fixed Roof Petroleum Tanks	Y	Y	16.2	Y
15. Use of Cutback Asphalt	Y	Y	16.19	Y
Group II				
16. Surface Coating Misc. Metal Parts	Y	Y	16.7	NA
17. Surface Coating Flat Wood Panel	Y	Y	16.7	NA
18. Manufacture Vegetable Oils	NS	--	--	NS
19. Leaks from Refinery Equipment	Y	Y	16.18	Y
20. Synthetic Pharmaceutical Product	Y	Y	16.16	Y
21. Pneumatic Rubber Tires	NS	--	--	NS
22. Graphic Arts – Roto & Flex	Y	Y	16.7	NA
23. External Floating Roof Tanks	Y	Y	16.2	Y
24. Perchloroethylene Dry Cleaning	NA	--	--	NA
25. Leaks from Gasoline Tank Trucks and Vapor Collection System	Y	Y	16.3	Y
Group III				
26. Large Petroleum Dry Cleaners	Y	Y	16.20	Y
27. High-Density Polyethylene	Y	Y	16.16	Y
28. Nat.Gas/Gasoline Process Leaks	Y	Y	16.18	Y
29. Synthetic Chemical Mfg. Equip Fugitives	Y	Y	16.18	Y
30. Air Oxidation Processes in Synthetic Organic Chemical Mfg. Industry (SOCMI)	Y	Y	16.16	Y

1990 - 2005 CTG Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
1. Reactors and Distillation SOCMI	Y	Y	16.16	Y
2. Offset Lithographic Printing	NA	--	--	NA
3. Wood Furniture Manufacturing	Y	Y	16.7	Y
4. Ship Building and Repair*	NS	--	--	NS
5. Aerospace Coatings	NS	--	--	NS

2006 CTG Documents	Rules Adopted In NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
1. Flat Wood Paneling Coatings	Y	Y	16.7	Y
2. Lithographic Printing Materials and Letterpress Printing Materials	Y	Y	16.7	Y
3. Flexible Packaging Printing Materials	Y	Y	16.7	Y
4. Industrial Cleaning Solvents	N	--	16.6	Pend.

2007 CTG Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
1. Paper, Film, and Foil Coatings	N	--	16.7	Pend.
2. Metal Furniture Coatings	NS	--	--	NS
3. Large Appliance Coatings	NS	--	--	NS

2008 CTG Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
1. Fiberglass Boat Manufacturing Materials*	N	--	TBD	Pend.

2008 CTG Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
2. Auto and Light Duty Truck Original Equipment Manufacturer (OEM) Assembly Coatings	NS	--	--	NS
3. Misc. Metal and Plastic Parts Coatings*	N	--	16.7	Pend.
4. Misc. Industrial Adhesives	Y	Y	26	Y

b. List of the USEPA's Alternative Control Techniques (ACT) for Control of VOC Emissions from Stationary Sources

Pre 1990 ACT Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C. 7:27	Meets RACT (75 ppb NAAQS)
1. Traffic Markings (NR)	Y	Y	23.3	Y
2. Auto Refinishing (NR)	NA	--	--	NA
3. Halogenated Solvent Cleaners	Y	Y	16.6	Y

Post 1990 ACT Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C 7:27	Meets RACT (75 ppb NAAQS)
1. Agricultural Pesticide Application	Y	--	**	Y
2. Batch Processes	Y	Y	16.16	Y
3. Volatile Organic Liquids Storage	Y	Y	16.2	Y
4. Industrial Cleaning Solvents	Y	Y	16.6	NA
5. Surface Coating Plastic Parts	Y	Y	16.7	NA
6. Automobile Refinishing (NR)	Y	Y	16.12	Y
7. Ship Building and Repair	NA	--	--	NA
8. Industrial Wastewater	Y	Y	16.6	Y
9. Offset Lithographic Printing	NA	--	--	NA

c. List of USEPA's Alternative Control Techniques (ACT) for Control of NO_x Emissions from Stationary Sources

Post 1990 ACT Documents	Rules Adopted in NJ	USEPA Approved	N.J.A.C 7:27	Meets RACT (75 ppb NAAQS)
1. Iron and Steel Mills	NS	--	--	NS
2. ICI Boilers	Y	Y	19.7	Y
3. Glass Manufacturing	Y	Y	19.10	Y
4. Stationary RICE	Y	Y	19.8	Pend.
5. Process Heaters	Y	Y	19.7	Y
6. Stationary Gas Turbines	Y	Y	19.5	Pend.
7. Utility Boilers	Y	Y	19.4	Y
8. Cement Manufacturing	NS	--	--	NS
9. Nitric and Adipic Mfg. Plants	NS	--	--	NS

*These control measures are based on the coating VOC limits from NESHAP subpart VVVV
** N.J.A.C. 7:30, New Jersey Pesticide Control Rules

ii. Certifications of VOC and NO_x RACT for Major Non-CTG/ACT Sources

In 2009, the NJDEP adopted VOC and NO_x RACT for major non-CTG sources located in the State. Those sources for which guidance was not published, but for which the NJDEP established RACT, include:

1. High Electric Demand Day boilers serving EGUs [N.J.A.C. 7:27-19.4];
2. High Electric Demand Day turbines serving EGUs [N.J.A.C. 7:27-19.5];
3. Asphalt paving production plants [N.J.A.C. 7:27-19.9];
4. Alternative VOC control requirements [N.J.A.C. 7:27-16.7];
5. Alternative and facility-specific NO_x emission limits [N.J.A.C. 7:27-19.13];
6. Municipal solid waste (MSW) incinerators [N.J.A.C. 7:27-19.12]; and
7. Sewage sludge incinerators [N.J.A.C. 7:27-19.28].

The NJDEP has determined that currently effective emission limits for these source categories still represent RACT in 2014 for the 75 ppb ozone standard.

iii. New Jersey's Plan to Implement RACT

As summarized in Table II-2, most source categories continue to meet the necessary RACT requirements (indicated with a "Y" in the "Meets RACT" column). The source categories marked "Pend.," four CTGs and two ACTs, indicate that these source categories are currently being reevaluated, and New Jersey may adopt more stringent limits or measures to further reduce VOC or NO_x.

The NJDEP commits to address four CTGs, and two NO_x ACT categories:

1. Industrial Cleaning Solvents (2006 CTG);
2. Paper, Film, and Foil Coatings (2007 CTG);
3. Fiberglass Boat Manufacturing Materials (2008 CTG);
4. Misc. Metal and Plastic Parts Coatings (2008 CTG);
5. Stationary RICE (NO_x ACT); and
6. Stationary gas turbines (NO_x ACT).

Stakeholder outreach sessions have been completed for the CTG categories, and rule revision proposals are being developed consistent with the RACT limits and applicability requirements of the CTGs. These are anticipated to be proposed, in accordance with the New Jersey Administrative Procedures Act (APA), (N.J.S.A. 52:14B-1 et. seq.) and the New Jersey Air Pollution Control Act (APCA), (N.J.S.A. 26:2C-1 et seq.), in 2014.

Regarding the two NO_x ACT categories, for natural gas compressor station engines and turbines, the NJDEP expects to meet with stakeholders on July 14, 2014, to discuss more stringent NO_x limits being considered for the rule proposal with the aforementioned CTGs.

iv. Negative Declarations

By comparing the list of existing CTGs and ACTs with the NJDEP's effective rules, and researching the NJEMS emission statements and permitting databases for source categories by Standard Industrial Code (SIC), the NJDEP has determined that the following source-specific categories either do not exist in this State, or fall below significant emission unit applicability thresholds in the CTGs and ACTs.

1. Manufacture of Vegetable Oils;
2. Manufacture of Pneumatic Rubber Tires;
3. Aerospace Coatings;
4. Iron and Steel Mills;
5. Cement Manufacturing;
6. Nitric and Adipic Manufacturing Plants;
7. Shipbuilding and Ship Repair Operations;
8. Metal Furniture Coatings;
9. Large Appliance Coatings; and
10. Auto and Light Duty Truck Original Equipment Manufacturer (OEM) Assembly Coatings.

<u>Shipbuilding and Ship Repair Operations, Fiberglass Boat Manufacturing, and Miscellaneous Metal and Plastic Parts Control Techniques Guidelines</u>

The NJDEP has determined that Bayonne Dry Dock and Repair (PI#12517) with a potential to emit less than 25 tons of VOC per year is not subject to the requirements of the Shipbuilding and Ship Repair Operations CTG. Viking Yacht, which manufactures pleasure vessels, is subject to both the Fiberglass Boat Manufacturing and Miscellaneous Metal and Plastic Parts CTG requirements, and is currently subject to NESHAPS subpart VVVV for National Emission Standards for Boat Manufacturing.[26] A compliance inspection on August 28, 2013, 2013 MACT reports, as well as the Six Month Deviation report and Combined Annual Certification for 2013 indicate that the facility is in compliance with subpart VVVV. Since all three CTGs require the same VOC limits for coatings as NESHAP subpart VVVV, Viking Yacht is therefore in

[26] http://www.epa.gov/ttn/atw/boat/fr22au01.pdf

compliance with the EPA CTGs and there is no need to incorporate the Shipbuilding and Ship Repair Operations CTG in New Jersey's RACT rule.

v. USEPA Responsibilities

New Jersey does not yet meet the ozone standard. Therefore, the federal Clean Air Act requires new sources of NO_x (e.g., power plants) and VOCs (e.g., gasoline refineries) to offset their NO_x and VOC emissions by buying emissions "credits" that are sold by other facilities. Emissions offset credits can be costly and time-consuming to obtain, which is an added burden on new businesses or existing businesses that want to expand. Some upwind neighbors contribute significantly to New Jersey's ozone problem, but they do not have to comply with the "offset" requirements that New Jersey does if those states meet the ozone standard. Thus, a company that wants to build a facility in the Northeast might find states upwind of New Jersey more attractive.

New Jersey takes exception to USEPA's lack of action on upwind states which continues to place New Jersey in an economically less competitive position. USEPA should focus its resources on reducing ozone transport from upwind states and addressing daily emissions of NO_x. USEPA is already aware that maximum daily NO_x levels are increasing in some states upwind of New Jersey.

New Jersey is meeting its responsibilities by working with other states and the federal government to remedy these RACT inconsistencies among states and to ensure that all states do their part to reduce ozone levels throughout the Northeast; USEPA needs to do its part.

In order to establish a level playing field among states in the region, USEPA should ensure that more stringent RACT emission limits already on the books and achieved in practice in downwind states, including New Jersey, are presumptive RACT for all states. USEPA's June 6, 2013, 75 ppb Ozone Implementation Rule Proposal, [27] requires states to consider recent RACT determinations made by other nonattainment areas. As a condition of approval, USEPA should ensure that up-to-date RACT is required for all SIPs in all states in the ozone transport region (OTR), as well as all states significantly affecting a nonattainment area.

vi. Update of New Jersey's Facility-Specific Emission Limits, Alternative Emission Limits and Alternative Control Plans

The requirement to review and update RACT also applies to all source-specific RACT limits. In New Jersey, facilities that have sources with potential to emit NO_x or VOC above major source thresholds, and for which no RACT limit has been established, are required to develop facility specific emission limits (FSELs). Similarly, facilities that are not reasonably able to comply with RACT limits in the rules may request alternative emission limits (AELs) for NO_x or alternative control plans (ACPs) for VOC. If approved by the NJDEP after public comment, these are submitted to USEPA as SIP revisions.

The amended 2009 RACT rules, N.J.A.C. 7:27-16.17[28] and N.J.A.C. 7:27-19.13[29] required any facility with an AEL, ACP or FSEL to meet the revised RACT rules if applicable for a given piece

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[27] 78 FR 34178, June 6, 2013

[28] An FSEL has no expiration date and remains in place unless source becomes subject to a new RACT rule.

[29] Any AEL or ACP approved by the Department after May 19, 2009, has a term of 10 years.

of equipment or source operation, or reapply for a new source-specific limit. Many of these facilities subsequently met the adopted RACT standards after the original AEL or ACP and did not need to reapply. Other sources with FSELs, such as municipal waste combustors and sewage sludge incinerators, complied with new RACT limits. Equipment such as process heaters and fluid catalytic cracking units (FCCUs) at petroleum refineries became subject to more stringent emission limits due to a Federal enforcement initiative. Consequently, the number of case-by-case RACT limits has been reduced from 40[30] to 11 as of May 12, 2014.

The NJDEP has reviewed the State's existing 11 case-by-case determinations, or AELs, ACPs and FSELs. Based on the current data available from Title V operating permits, consent decrees, single-source NO_x RACT SIP files, and the State's RACT rules, New Jersey has determined that those facilities with a State-approved AEL, ACP, or FSEL meet RACT for the 75 ppb ozone standard. Those facilities with pending AEL or ACP applications will be evaluated and submitted as SIP revisions if approved by the NJDEP. The NJDEP anticipates that the FSELs under review will remain unchanged. Refer to Table II-3 for a summary of facilities in New Jersey with an existing, or pending, AEL, ACP or FSEL, and approval status.

[30] http://www.nj.gov/dep/baqp/sip/8-hrRACT-Final.pdf

Table II-3. Status of NO_x and VOC Source-Specific RACT Determinations

Source	Type of Emissions Limits	Approval Status	Does NJ anticipate submitting SIP revision?
1. Atlantic States Cast Iron Pipe Co. Warren County (PI#85441, BOP080003, cupola and annealing oven)	NO_x FSEL	NJ approved 10/25/2010	No
2. Johnson Matthey Gloucester County (PI#55788, PSP140001, furnace)	NO_x FSEL	Resubmittal under review by NJDEP	No
3. Paulsboro (formerly Valero Refining Co) (formerly Mobil Oil Corp) Gloucester County (PI#55829, BOP130002, external floating roof tanks)	VOC ACP	New submittal under review by NJDEP	Yes
4. Phillips 66 (formerly Conoco Phillips) (formerly Bayway Refining) Union County (PI#41805, PSP130002, external floating roof tanks)	VOC ACP	New submittal under review by NJDEP	Yes
5. Buckeye Port Reading Terminal (formerly Amerada Hess) Middlesex County (PI#17996, PSP130001, external floating rooftanks)	VOC ACP	New submittal under review by NJDEP	Yes
6. Gerdau Ameristeel Corp of Sayreville Middlesex County (PI#18052, PSP140001, electric arc furnace and billet reheat furnace)	NO_x FSEL	Resubmittal under review by NJDEP	No
7. Veolia (formerly Trigen-Trenton Energy) Mercer County (PI#61015, BOP040002, internal combustion engines)	NO_x AEL	NJ approved 01/11/2007	Done[1]
8. NGC Industries (formerly GP Gypsum) Burlington County (PI#45980, PSP120001, board dryer)	NO_x FSEL	Resubmittal under review by NJDEP	No
9. Georgia Pacific Gypsum Camden County (PI#51611, BOP140001, board dryer)	NO_x FSEL	Resubmittal under review by NJDEP	No[2]
10. Anheuser-Busch Essex County (PI#07551, PSP090001, can fillers)	VOC FSEL	Resubmittal under review by NJDEP	No
11. Naval Weapons Station Earle Monmouth County (PI#21138, PSP090002, two diesel engines)	NO_x AEL	NJ approved 05/21/2009	Done[1]

[1] SIP revision approved by EPA

[2] The facility has requested the deletion of the Board Dryer from the operating permit with the renewal application

The facilities listed in Table II-4 no longer require an AEL, ACP or a FSEL due to plant closings, equipment shutdown, equipment replacement, or affected equipment now operating in compliance with adopted RACT limits.

Table II-4. List of Terminated Source-Specific Limits and Control Plans

	Plant PI #	Facility (Name)	Location (County)
1.	26239	Algonquin Gas Transmission Hanover	Morris
2.	12202	PSEG Hudson	Hudson
3.	26187	Texas Eastern Hanover	Union
4.	45954	Griffin Pipe Co	Burlington
5.	45904	Hoeganaes Corp	Burlington
6.	55793	Gloucester County Resource Recovery Facility	Camden
7.	85455	Warren County Resource Recovery Facility	Warren
8.	51614	Camden County Resource Recovery Facility	Camden
9.	07736	Essex County Resource Recovery Facility	Essex
10.	41814	Union County Resource Recovery Facility	Union
11.	17767	PQ Corporation	Middlesex
12.	26173	Novartis Pharmaceuticals	Morris
13.	61036	Stony Brook Regional Sewerage Treatment Authority	Mercer
14.	65491	Dupont	Salem
15.	26209	Parsippany-Troy Hills Sewage Treatment Plant	Morris
16.	35884	3M	Somerset
17.	73242	RC Cape May (BL England)	Cape May
18.	18048	Air Products & Chemicals	Gloucester
19.	41708	Schering	Union
20.	65498	US Generating Co, Carneys Point	Salem
21.	55834	US Generating Co, Logan	Gloucester
22.	45968	US Pipe & Foundry	Burlington
23.	35857	Somerset Raritan Valley Sewerage Authority	Somerset
24.	65495	Conectiv Atlantic Generation, Deepwater Station	Salem
25.	30436	Twp. of Wayne, Mountain View Water Pollution Control Facility	Passaic
26.	65530	Oxyvinyls LP (formerly Geon Co.)	Salem
27.	18005	Amerada Hess Corp	Middlesex
28.	55781	Sunoco Eagle Point (formerly Coastal Eagle Point Oil)	Gloucester
29.	18045	Gerdau Ameristeel Corp Perth Amboy (formerly Co-Steel Raritan Corp)	Middlesex
30.	60976	Homasote Company	Mercer
31.	07906	Lafarge Gypsum (formerly Continental Gypsum) Port Newark	Essex
32.	80337	Texas Eastern Lambertville	Hunterdon
33.	07726	University of Medicine and Dentistry of New Jersey	Essex

vii. Regional Reasonably Available Control Technology Principles

On June 11, 2014, the Ozone Transport Commission adopted a Statement of Reasonably Available Control Technology Principles. The Principles can be found in Appendix I. The Statement calls for:

1) Existing requirements in states provide a benchmark for other states to use to define RACT;
2) Sources with air pollution controls must operate the controls year round and minimize daily emissions during the ozone season;
3) For power plants, compliance with the USEPA Clean Air Interstate Rule is not a substitute for RACT, and peaking units need to be assessed; and
4) The averaging time for the RACT emission limits should be as short as practicable and consistent with the ozone standard and operation of the source.

The existing New Jersey RACT rules were considered in the development of these principles and the sources in New Jersey meet these principles.

The Ozone Transport Commission is a multi-state organization established by the Clean Air Act to address the transport of ozone in the Mid-Atlantic–Northeast region of the United States. All states in the Ozone Transport Region must include RACT in its rules.

III. 2011 Periodic Emission Inventory

A. 2011 Inventory

The Clean Air Act 42 U.S.C. §7410(a)(2)(F) (Section 110 (a)(2)(F)) requires the submission by states to the United States Environmental Protection Agency (USEPA) of periodic reports on the nature and amounts of emissions from pollutants with a National Ambient Air Quality Standard and emissions related data. 42 U.S.C. §§7511a(1), 7511a(3) and 7502 (Sections 182(a)1, 182(a)(3) and 172(c)(3)) require that states submit periodic emission inventories for marginal and above nonattainment areas in accordance with USEPA guidance.

This inventory is a compilation of the emissions from sources of anthropogenic (human-made) and biogenic (natural) volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 2.5 micrometers and 10 micrometers in diameter (PM2.5 and PM10), sulfur dioxide (SO_2) and ammonia (NH_3) in the outdoor air. The sources are divided into five sectors and each making up one component of the inventory: point sources, area sources, onroad mobile sources, nonroad mobile sources and biogenic sources.

Point sources are stationary facilities that emit or have the potential to emit at or above any of the following thresholds: 10 tons per year (tpy) of VOC, 25 tpy of NO_x, 100 tpy of carbon monoxide, $PM_{2.5}$, SO_2 or ammonia. Area sources include emissions from numerous facilities or activities that individually release small amounts of a given pollutant, but collectively they can release significant amounts of a pollutant. This includes small stationary sources that fall below required emission reporting thresholds by the Emission Statement Program such as gas stations, autobody refinishing facilities and dry cleaners. Area sources also include emissions from the use of products by the general population such as from the use of paints and consumer products. Onroad mobile source emissions include exhaust (i.e., tailpipe) and brake/tire emissions from all onroad vehicles such as cars, trucks and buses. Nonroad mobile source emissions include exhaust emissions from sources such as commercial marine vessels, airplanes, locomotives, pleasure boats, forklifts, lawn and garden equipment, portable generators. Biogenic emissions are produced by living organisms or biological processes and include emissions from plant matter as well as humans, domestic animals, and wild animals.

This report includes the 2011 air emission inventory for the pollutants listed in Table III-1.

Table III-1: 2011 Air Emission Inventories Prepared

	Summer Day	Annual
VOC	√	√
NO_x	√	√
CO	√	√
PM2.5		√
PM10		√
SO_2		√
NH_3		√

A summary of the 2011 Periodic Emission Inventory for New Jersey is presented in Table III-2 and Figures III-2 through III-8 by pollutant and source sector. Summaries of the 2011 periodic emission inventory by ozone nonattainment areas are included in Tables III-3 and III-4. New Jersey's full 2011 Periodic Emission Inventory is included in Appendix II.

Table III-2: 2011 Statewide Emission Inventory by Source Sector and Pollutant

VOC					
Source Sector	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**	**% of Anthropogenic Summer Day Inventory**	**% of Anthropogenic Annual Inventory**
Point	40	7,320	2%	7%	4%
Area	274	93,726	30%	50%	51%
Onroad	101	40,206	13%	18%	22%
Nonroad	139	40,938	13%	25%	22%
Biogenic*	344	125,687	41%	NA	NA
Total in State	898	307,877	100%	NA	NA
Total Anthropogenic	554	182,190	NA	100%	100%

NOx					
Source Sector	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**	**% of Anthropogenic Summer Day Inventory**	**% of Anthropogenic Annual Inventory**
Point	129	14,793	8%	22%	8%
Area	32	24,157	13%	6%	13%
Onroad	260	92,356	50%	45%	51%
Nonroad	160	50,834	28%	28%	28%
Biogenic*	4	1,539	1%	NA	NA
Total in State	586	183,679	100%	NA	NA
Total Anthropogenic	581	182,140	NA	100%	100%

CO					
Source Sector	**Tons per Summer Day**	**Tons per Year**	**% of Total Annual Inventory**	**% of Anthropogenic Summer Day Inventory**	**% of Anthropogenic Annual Inventory**
Point	67	7,055	1%	2%	1%
Area	47	76,341	8%	2%	8%
Onroad**	1,109	475,513	49%	41%	49%
Nonroad	1,477	401,977	41%	55%	42%
Biogenic*	39	14,199	1%	1%	NA
Total in State	2,739	975,085	100%	NA	NA
Total Anthropogenic	2,700	960,886	NA	100%	100%

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365. **Onroad Annual CO from USEPA 2011 National Emission Inventory (NEI).

Table III-2 (continued):
2011 Statewide Emission Inventory by Source Sector and Pollutant

Source Sector	PM2.5**			Source Sector	PM10**		
	Tons per Year	% of Total Inventory	% of Anthropogenic Annual Inventory		Tons per Year	% of Total Inventory	% of Anthropogenic Annual Inventory
Point	2,710	11%	11%	Point	3,611	10%	10%
Area	14,420	59%	59%	Area	22,072	63%	63%
Onroad	3,557	15%	15%	Onroad	5,328	15%	15%
Nonroad	3,567	15%	15%	Nonroad	3,757	11%	11%
Biogenic	NA	NA	NA	Biogenic	NA	NA	NA
Total in State	24,254	100%	NA	**Total in State**	34,768	100%	NA
Total Anthropogenic	24,254	NA	100%	**Total Anthropogenic**	34,768	NA	100%

Source Sector	SO_2			Source Sector	Ammonia		
	Tons per Year	% of Total Inventory	% of Anthropogenic Annual Inventory		Tons per Year	% of Total Inventory	% of Anthropogenic Annual Inventory
Point	6,415	38%	38%	Point	1,021	5%	10%
Area	6,669	40%	40%	Area	6,997	36%	66%
Onroad	879	5%	5%	Onroad	2,506	13%	24%
Nonroad	2,836	17%	17%	Nonroad***	50	0%	0%
Biogenic	NA	NA	NA	Biogenic*	9,032	46%	NA
Total in State	16,799	100%	NA	**Total in State**	19,606	100%	NA
Total Anthropogenic	16,799	NA	100%	**Total Anthropogenic**	10,574	NA	100%

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365.
** These totals include adjusted emissions from fugitive dust categories in the area source inventory.
*** Nonroad ammonia is from USEPA 2011 NEI

Table III-3: New Jersey Portion of Northern NJ-NY-CT Ozone Nonattainment Area 2011 Emission Inventory

County	VOC						
	Tons Per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Bergen	1	25	11	14	5	57	52
Essex	3	22	6	6	3	40	38
Hudson	3	16	4	4	1	28	27
Hunterdon	0.2	4	2	3	11	21	10
Middlesex	17	25	9	9	10	71	61
Monmouth	0.4	19	8	10	23	60	37
Morris	1	16	6	9	14	46	32
Passaic	1	15	5	5	7	32	25
Somerset	1	11	4	6	9	31	22
Sussex	0.1	5	2	4	16	26	11
Union	4	17	6	6	2	35	33
Warren	0.4	4	2	2	10	18	8
Total in Northern NAA Area	**31**	**179**	**65**	**79**	**110**	**465**	**355**

County	NO_x						
	Tons per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Bergen	4	3	27	15	0.1	49	49
Essex	12	3	16	15	0.1	46	46
Hudson	17	2	8	14	0.1	42	42
Hunterdon	6	0.5	7	4	0.3	18	17
Middlesex	19	3	24	13	0.2	59	59
Monmouth	1	2	15	12	0.2	29	29
Morris	1	2	16	7	0.1	26	26
Passaic	0.3	2	10	5	0.1	16	16
Somerset	1	1	11	6	0.2	20	19
Sussex	0.2	1	3	2	0.2	6	6
Union	9	2	16	12	0.1	39	39
Warren	2	0.4	6	2	0.3	10	10
Total in Northern NAA Area	**72**	**22**	**159**	**105**	**2**	**360**	**358**

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365.

Table III-3 (continued): New Jersey Portion of Northern NJ-NY-CT Ozone Nonattainment Area 2011 Emission Inventory

County	CO Tons per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Bergen	1	3	128	198	1	332	331
Essex	12	3	71	85	1	171	171
Hudson	7	2	38	41	0.3	89	88
Hunterdon	2	1	22	37	2	65	63
Middlesex	22	4	109	133	1	269	267
Monmouth	1	2	84	114	2	204	201
Morris	0.4	2	73	121	2	199	197
Passaic	0.2	2	52	62	1	117	116
Somerset	1	1	42	90	1	136	135
Sussex	0.4	1	18	29	2	50	48
Union	3	2	67	81	0.5	154	154
Warren	1	1	17	19	2	39	38
Total in State	**51**	**25**	**722**	**1,012**	**15**	**1,825**	**1,810**

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365.

Table III-4: New Jersey Portion of Southern NJ-PA-DE-MD Ozone Nonattainment Area 2011 Emission Inventory

County	VOC						
	Tons Per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Atlantic	0.2	9	4	8	41	62	21
Burlington	1	14	7	7	50	80	29
Camden	1	14	7	5	16	42	27
Cape May	0.3	4	2	10	15	31	16
Cumberland	0.3	7	2	3	27	39	12
Gloucester	4	16	4	5	17	46	29
Mercer	1	11	5	5	10	31	21
Ocean	0.3	16	6	14	42	79	37
Salem	1	3	1	2	17	24	7
Total in Southern NAA Area	**8**	**95**	**36**	**59**	**234**	**433**	**199**

County	NO_x						
	Tons per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Atlantic	1	1	14	6	0.3	22	22
Burlington	9	2	18	9	0.4	38	37
Camden	2	2	17	7	0.2	27	27
Cape May	14	0.4	6	6	0.2	26	26
Cumberland	5	1	5	4	0.4	15	15
Gloucester	7	1	11	7	0.3	26	26
Mercer	6	2	14	6	0.2	28	28
Ocean	3	2	11	9	0.3	25	25
Salem	10	0.3	6	2	0.4	18	18
Total in Southern NAA Area	**57**	**10**	**102**	**55**	**2**	**226**	**223**

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365.

Table III-4 (continued): New Jersey Portion of Southern NJ-PA-DE-MD Ozone Nonattainment Area
2011 Emission Inventory

County	CO Tons per Summer Day						
	Point Sources	Area Sources	Onroad Sources	Nonroad Sources	Biogenic*	Total	Total Anthropogenic
Atlantic	1	2	47	48	3	101	98
Burlington	3	7	69	80	5	164	158
Camden	0.5	3	65	62	1	132	130
Cape May	1	1	18	45	1	67	65
Cumberland	2	1	16	20	3	43	40
Gloucester	2	1	41	51	2	98	96
Mercer	1	2	53	58	1	116	115
Ocean	2	4	64	89	4	163	159
Salem	3	1	15	12	2	32	31
Total in State	**16**	**22**	**388**	**465**	**23**	**914**	**891**

* The USEPA estimated biogenic emissions in tons per year, therefore, 2011 tons per day values were estimated by dividing the annual value by 365.

Figure III-1
2011 New Jersey Volatile Organic Compound Emissions
Tons Per Summer Day

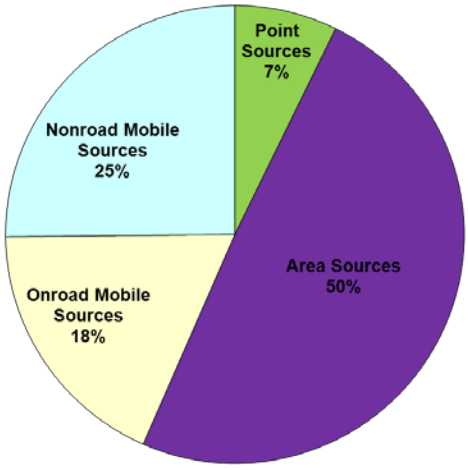


Figure III-2
2011 New Jersey Volatile Organic Compound Emissions including Biogenic Sources
Tons Per Summer Day

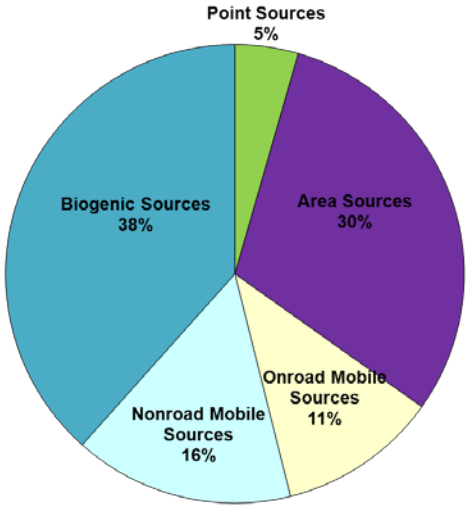


Figure III-3
2011 New Jersey Oxides of Nitrogen Emissions
Tons Per Summer Day

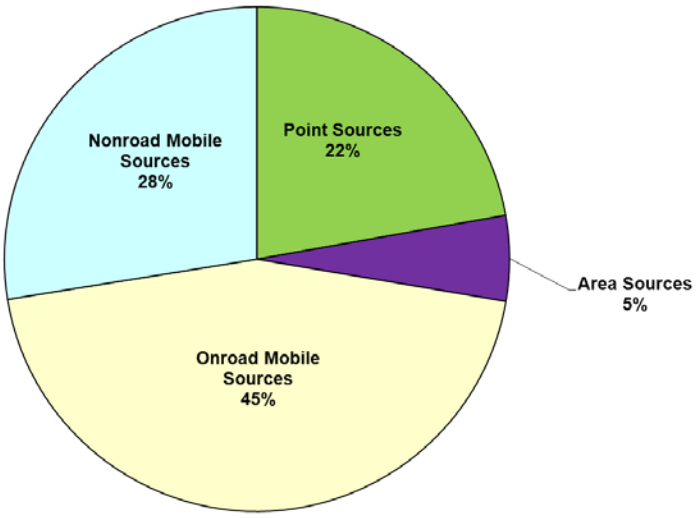


Figure III-4
2011 New Jersey Carbon Monoxide Emissions
Tons Per Summer Day

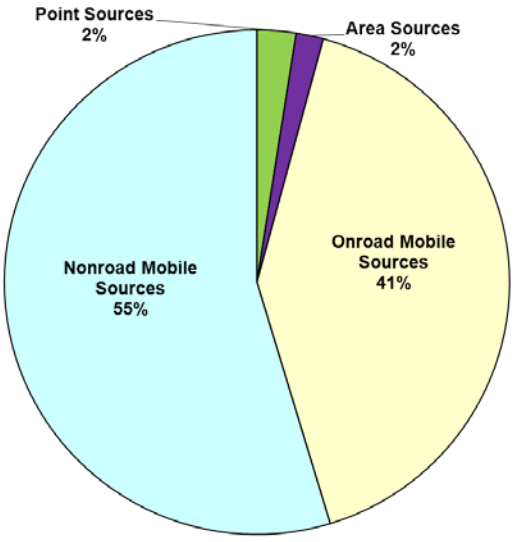
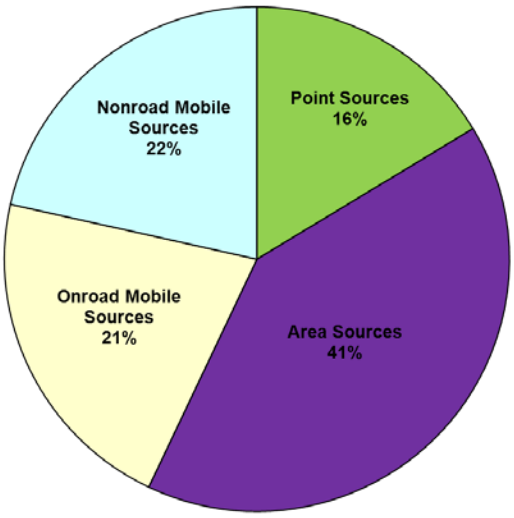


Figure III-5
2011 New Jersey Fine Particulate Matter Emissions
Tons Per Year



Note: Area Source emissions adjusted for fugitive dust

Figure III-6
2011 New Jersey Sulfur Dioxide Emissions
Tons Per Year

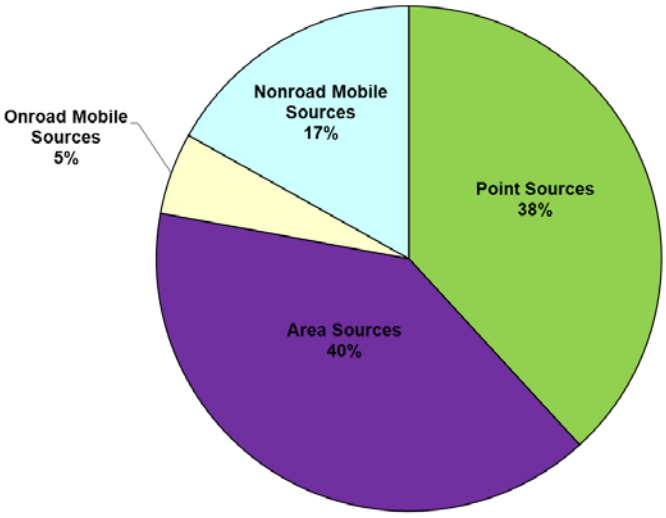
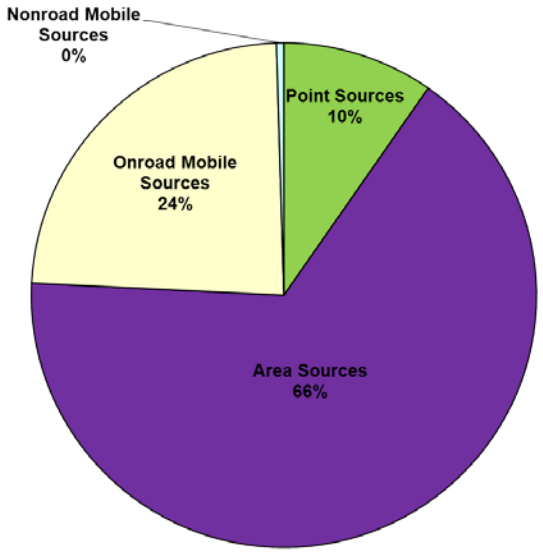


Figure III-7
2011 New Jersey Ammonia Emissions
Tons Per Year



Note: Nonroad 2011 is from USEPA NEI

As shown in Table III-2 and Figures III-1 through III-7, in the 2011 emission inventory, biogenic sources represent the largest fraction of VOCs. The area source sector represents the largest fraction of human-made VOC, followed by the nonroad sector. The onroad sector represents the largest fraction of NO_x, followed by the nonroad sector. The nonroad sector represents the largest fraction of carbon monoxide, followed by the onroad sector. The area source sector represents the largest fraction of PM2.5. The area source sector represents the largest fraction of SO_2, followed by the point source sector. Biogenic sources represent the largest fraction of ammonia, while the area source represents the largest fraction of human-made ammonia.

Figures III-8 through III-12 show a ranking of emission categories, from human-made sources, from highest to lowest.

Figure III-8
2011 New Jersey Volatile Organic Compound Emission Inventory
Top 15 by Emission Type

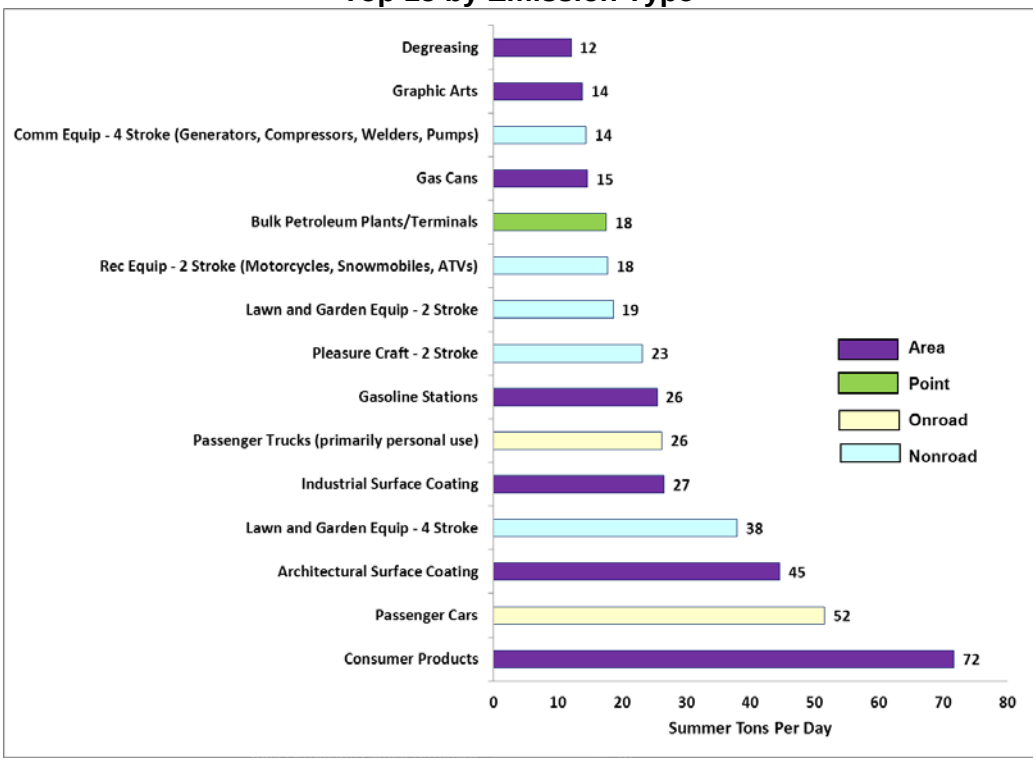


Figure III-9
2011 New Jersey Oxides of Nitrogen Emission Inventory
Top 15 by Emission Type

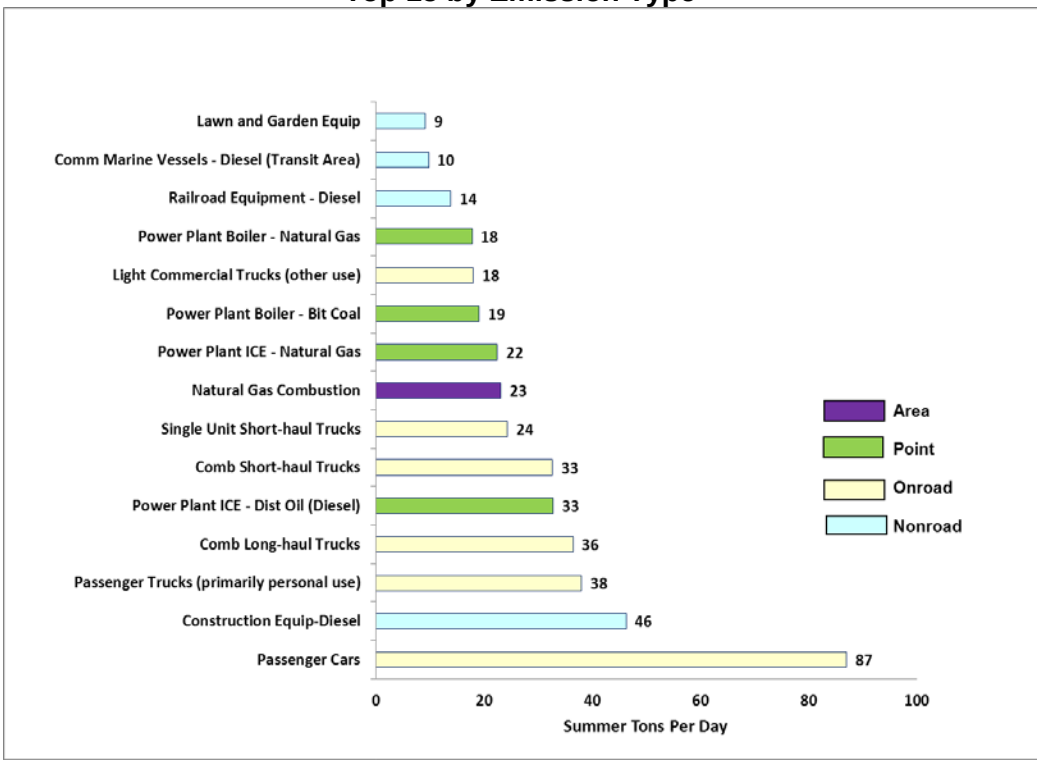


Figure III-10
2011 New Jersey Fine Particulate Matter Emission Inventory
Top 15 by Emission Type

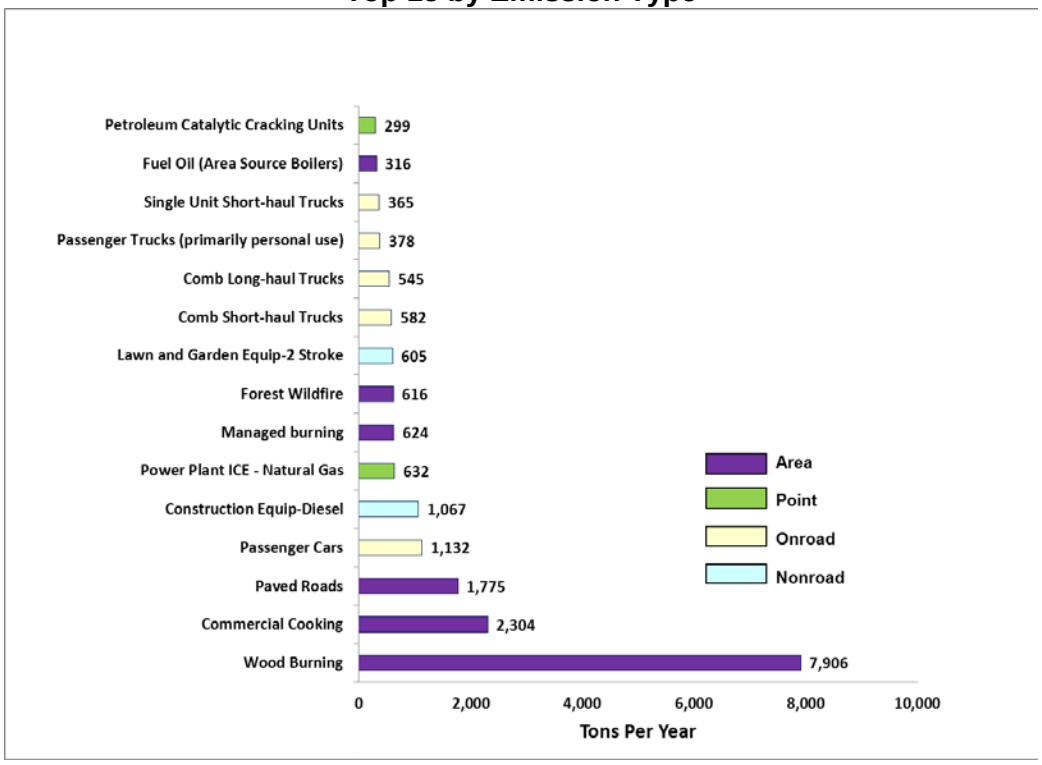


Figure III-11
2011 New Jersey Sulfur Dioxide Emission Inventory
Top 15 by Emission Type

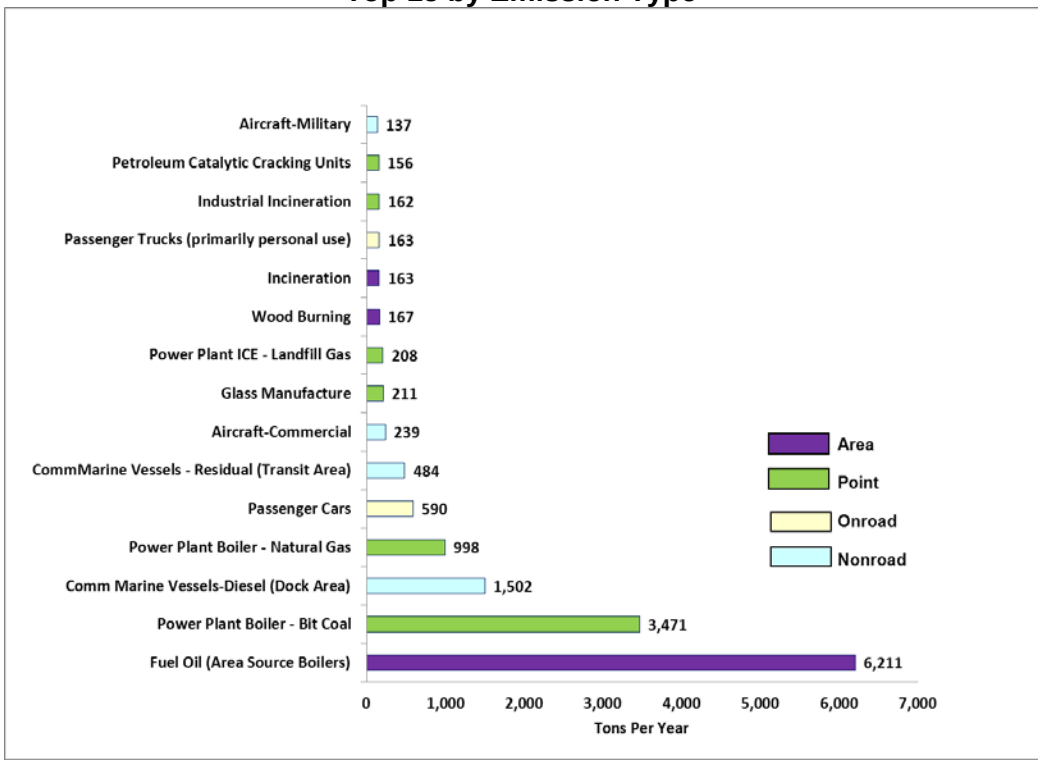
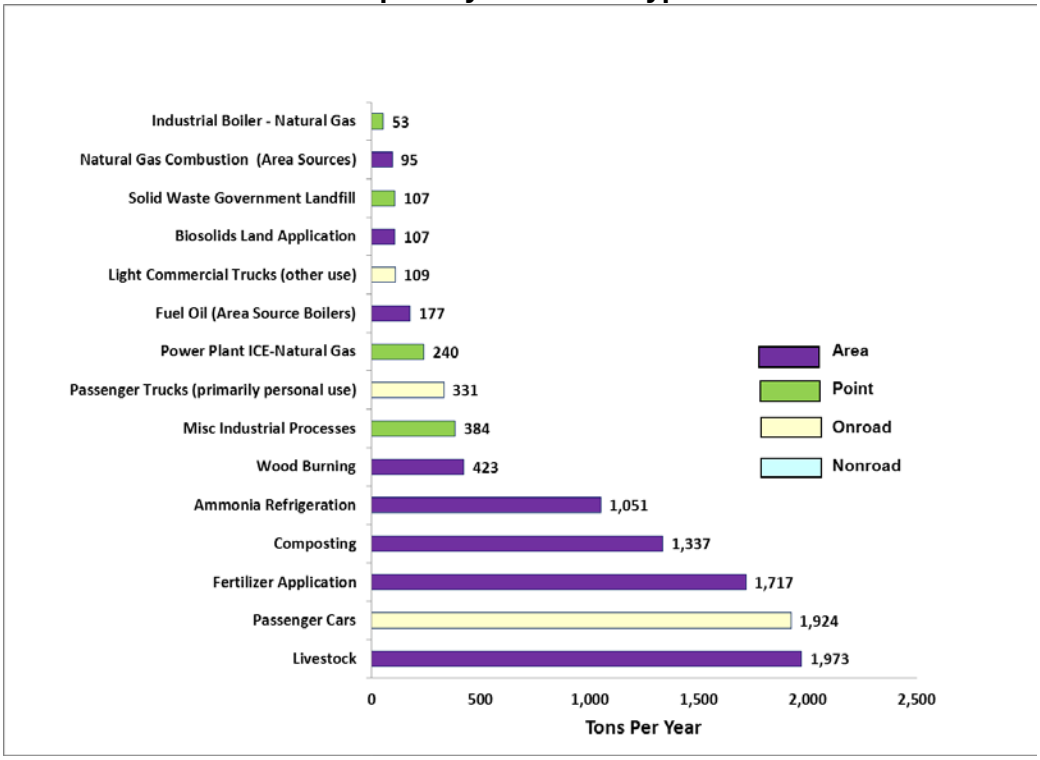


Figure III-12
2011 New Jersey Ammonia Emission Inventory
Top 15 by Emission Type



As shown in Figures III-8 through III-12, the top 5 categories of human-made 2011 emissions for summer VOCs are consumer products, passenger cars, architectural surface coatings, lawn and garden equipment (4 stroke) and industrial surface coatings. The top 5 categories for summer NO_x are passenger car exhaust, construction equipment, passenger trucks, combination long-haul trucks and diesel internal combustion engine power plants. The top 5 categories for annual PM2.5 are woodburning, commercial cooking, paved road dust, passenger car exhaust and construction equipment. The top 5 categories for annual SO_2 are fuel oil combustion, coal power plant boilers, commercial marine vessels, natural gas power plant boilers and passenger car exhaust. The top 5 categories for annual ammonia are livestock, passenger car exhaust, fertilizer, composting and ammonia refrigeration.

B. Inventory Trends

Figures III-13 through III-18 show emission trends from 2002 to 2011, from human-made sources.

Figure III-13
New Jersey Statewide Volatile Organic Compound Emission Trend

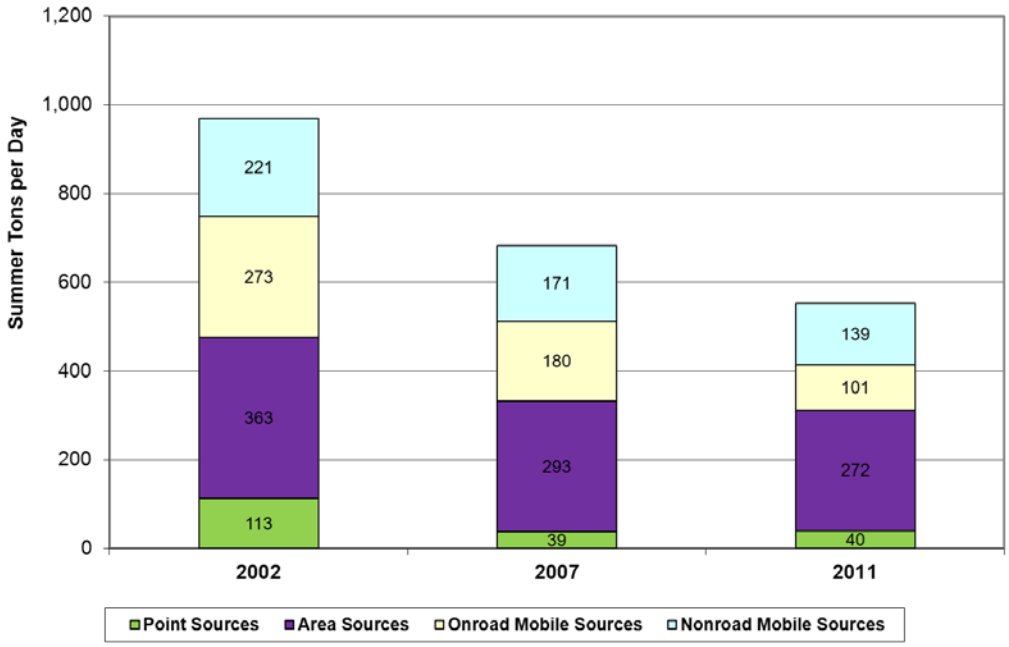


Figure III-14
New Jersey Statewide Oxides of Nitrogen Emission Trend

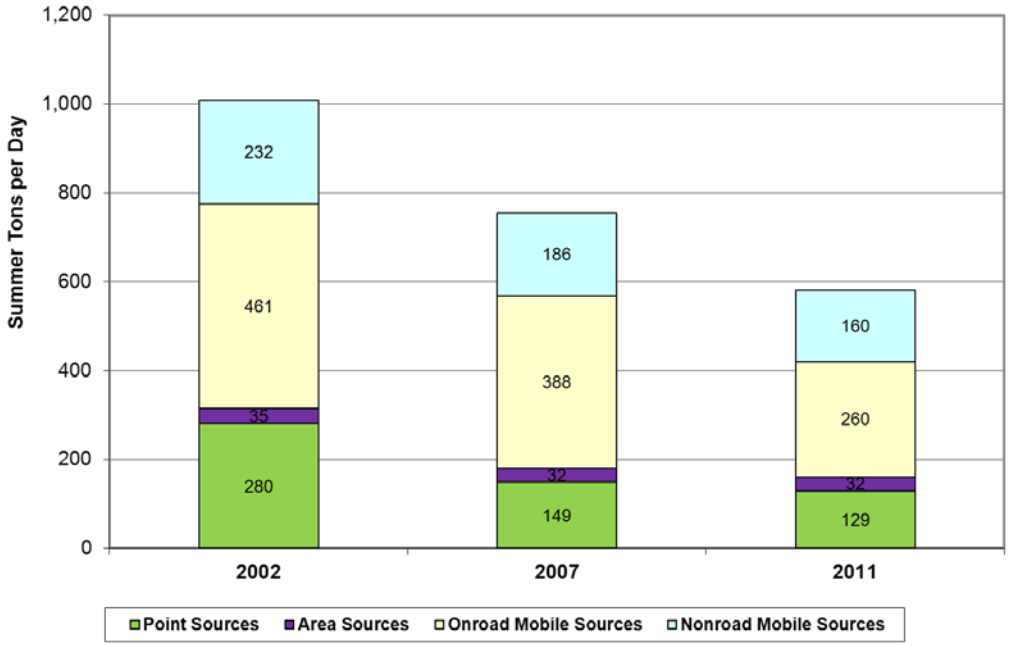


Figure III-15
New Jersey Statewide Carbon Monoxide Emission Trend

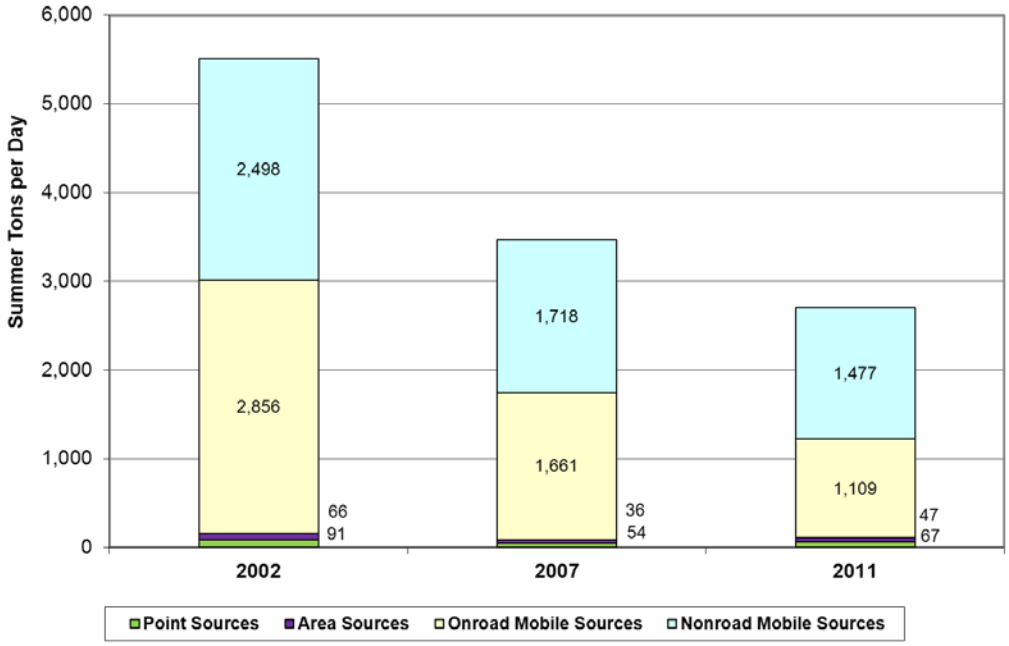
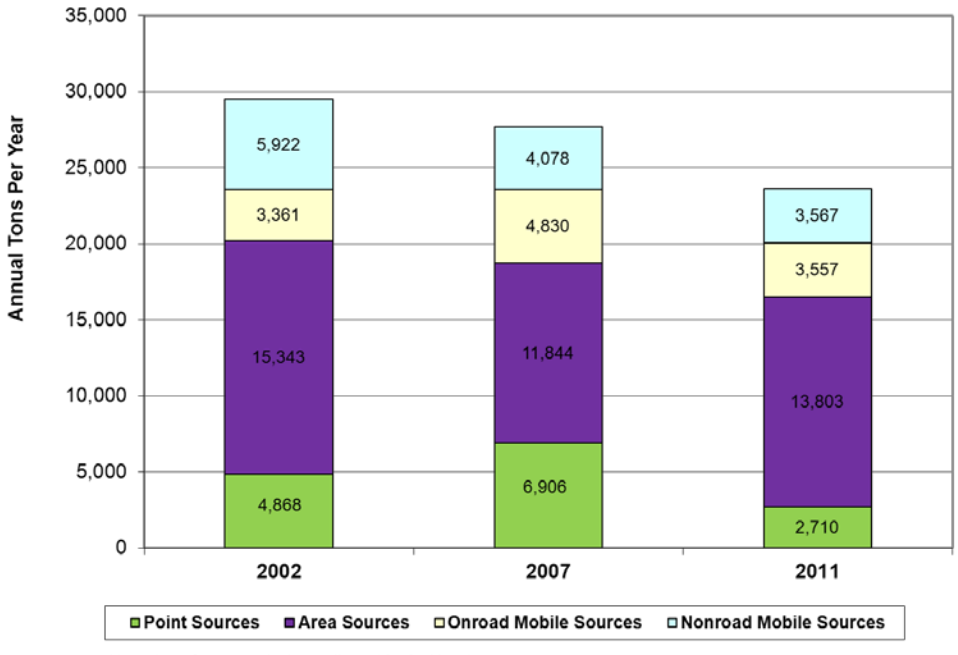


Figure III-16
New Jersey Statewide Fine Particulate Matter Emission Trend



Note: Area Source emissions adjusted for fugitive dust

Figure III-17
New Jersey Statewide Sulfur Dioxide Emission Trend

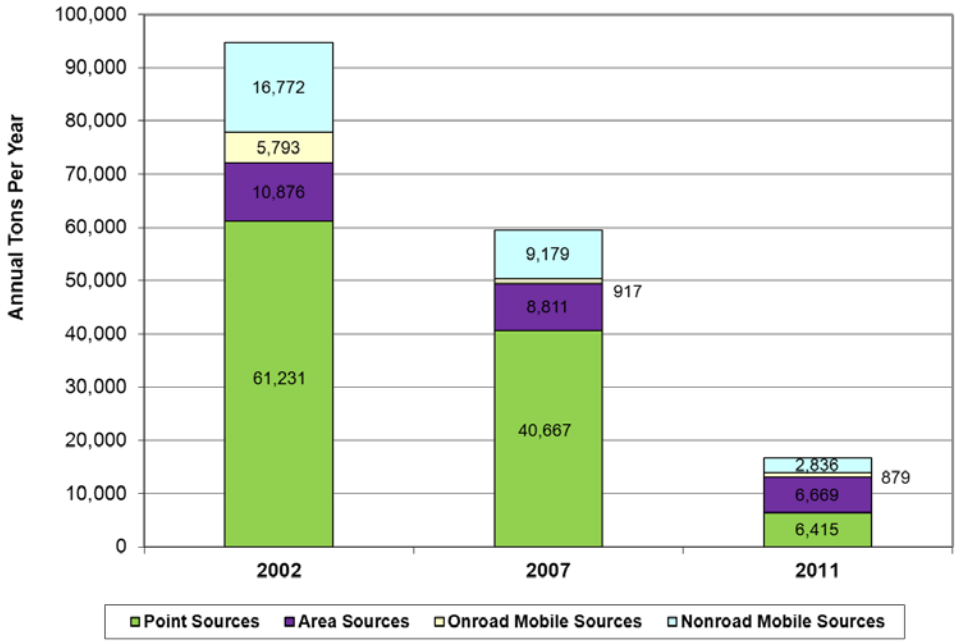
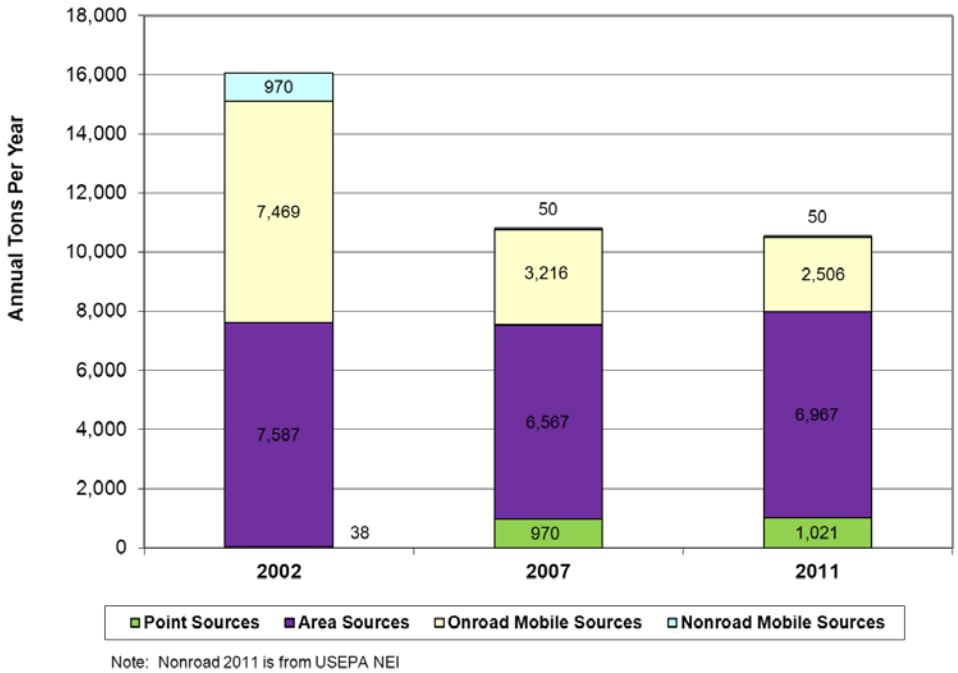


Figure III-18
New Jersey Statewide Ammonia Emission Trend



Note: Nonroad 2011 is from USEPA NEI

There were some emission calculation methodology changes in each emission inventory which should be noted when evaluating trends. For the onroad sector, emissions were calculated with a new USEPA model (MOVES) in 2007 and 2011, which was different than the model used for the 2002 inventory (MOBILE6). The new model results in higher NOx and PM2.5 emission estimates, than those in 2002. USEPA Residential wood burning methodologies and calculations changed for each of the inventories shown, resulting in significantly different results, lower in 2007 and higher again in 2011. This would primarily affect annual trends, not summer day trends. There are also known issues with the USEPA county distribution of the statewide residential wood burning emissions. Wildfires are not included in the trends graphs, because they are considered events and are inconsistent from year to year. PM2.5 was not reported in the 2002 Emission Statement program, therefore the point source emissions were estimated based on PM10 reporting, resulting in lower emissions in 2002 than 2007. Ammonia was also not reported in the 2002 Emission Statement program. Therefore, the 2007 and 2011 emissions are more representative of actual point source emissions for PM2.5 and ammonia, than 2002 emissions.

Figures III-14 through III-19 show estimated human-made emissions of VOCs have decreased from 2002-2011 by about 40%, NO_x has decreased by about 40%, PM2.5 has decreased by about 20%, SO_2 has decreased by about 80%, carbon monoxide has decreased by about 50%, and ammonia has decreased by about 35%.

VOC decreases were achieved in all sectors due to motor vehicle fleet turnover, Federal new engine standards for onroad and off road vehicles and equipment, the National and State low emission vehicle programs, area source rules such as consumer products, portable fuel containers, paints, autobody refinishing, asphalt paving applications, and solvent cleaning operations, and point source controls such as refinery consent decrees.

NO_x decreases were achieved in the onroad sector due to motor vehicle fleet turnover and the National and State low emission vehicle programs, and in the point source sector due primarily to the NO_x budget program for power plants, power plant and refinery consent decrees (contractual agreements) and New Jersey's high electric demand day and multi-pollutant power plant rules. NO_x decreases were achieved in the nonroad sector due to new engine standards for nonroad vehicles and equipment.

Carbon monoxide decreases were achieved primarily in the onroad and nonroad mobile sectors due to motor vehicle fleet turnover and new engine standards for nonroad vehicles and equipment.

Direct PM2.5 has decreased in the point source sector due power plant and refinery consent decrees and in the onroad and nonroad sectors due to motor vehicle fleet turnover, new engine standards for nonroad vehicles and equipment and the National and State low emission vehicle programs. Increases shown on the graphs in onroad and area sources and point sources are due to calculation methodology changes discussed above.

SO_2 decreases were achieved in all sectors and significantly in the point source sector due to the acid rain program and power plant consent decrees, in the area source sector due a decline in the use of distillate oil for heating, and in the onroad and nonroad sectors due to Federal rules that reduced sulfur levels in diesel fuel.

Ammonia decreases were achieved in the onroad and nonroad sectors due to motor vehicle fleet turnover and new engine standards for nonroad vehicles and equipment.

IV. Carbon Monoxide Maintenance and Monitoring Plan

A. Carbon Monoxide Maintenance Plan

1. Summary and Maintenance Commitment

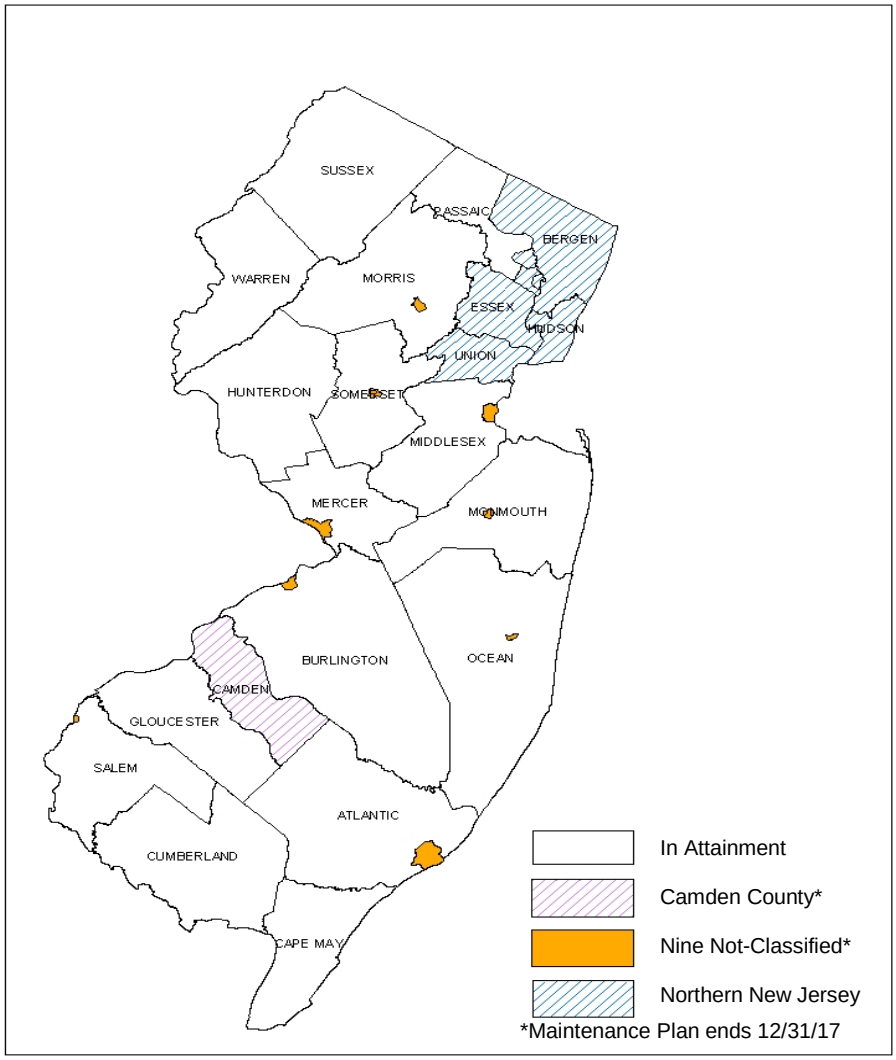
The Clean Air Act 42 U.S.C. §7505a (Section 175A) requires that eight years after redesignation of any area as an attainment area states submit an additional revision of the SIP for maintaining the National Ambient Air Quality Standard for the ten years beyond the initial ten-year maintenance period. The first ten-year maintenance plan for the Northern New Jersey-Long Island carbon monoxide maintenance area (or Northeastern carbon monoxide maintenance area) runs through December 31, 2014.[31] New Jersey is including in this proposed SIP revision a second ten-year limited maintenance plan that will cover the period from 2015 to 2024.

New Jersey qualifies for a limited maintenance plan, rather than a full maintenance plan, because monitoring concentrations of carbon monoxide are less than 85% of the standard. In a limited maintenance plan, future-year projection inventories and transportation conformity budgets are not required. Additional details regarding this proposed SIP revision for carbon monoxide are included in Appendix III.

This proposed SIP revision demonstrates continued compliance with the carbon monoxide National Ambient Air Quality Standard, describes how the State will continue to maintain the standard through December 31, 2024 in this area, and provides a contingency plan that would be implemented should the State ever again violate the existing standard in this area. New Jersey's 8-hour carbon monoxide maintenance areas are shown in Figure IV-1.

[31] 71 FR 38772, July 10, 2006

Figure IV-1
New Jersey Carbon Monoxide Maintenance Areas

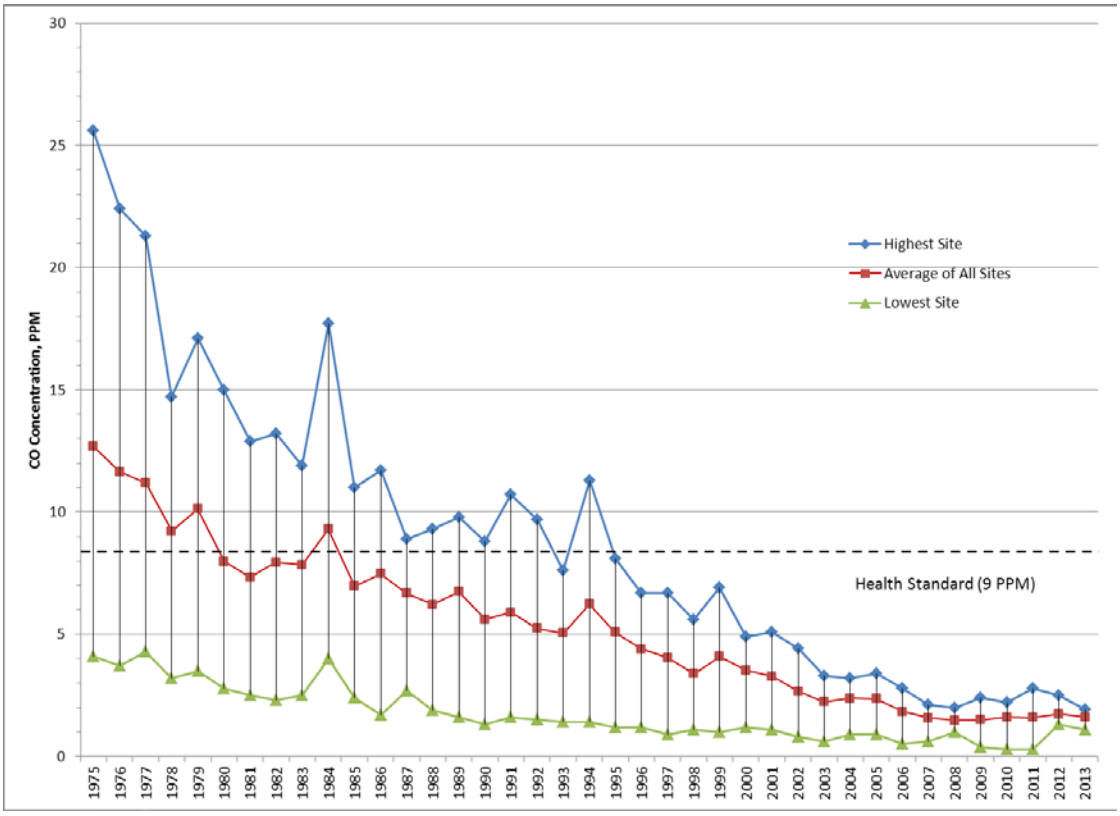


A violation of the National Ambient Air Quality Standard is measured based on two years of data (two year design value). For 8-hour carbon monoxide, if the area has a design value greater than 9 parts per million (ppm), it means there was a monitoring site where the second highest 8-hour average was greater than 9 ppm in at least one year.

Carbon monoxide concentrations in the ambient air have improved dramatically in New Jersey over the past thirty years and are currently less than half that of the standard. Carbon monoxide concentrations in New Jersey have not exceeded the 1-hour standard of 35 ppm since the late 1970s. Typical 1-hour maximum concentrations in New Jersey in recent years have been less than 7 ppm, well below the standard.

The last exceedance of the 8-hour carbon monoxide standard of 9 ppm was in 1995. Typical 8-hour carbon monoxide levels are less than two parts per million. New Jersey's noncompliance of the 8-hour carbon monoxide standard prior to 1996 was due primarily to onroad mobile sources and was limited to specific areas during stagnating meteorological conditions. Figure IV-2 shows the second highest 8-hour value recorded throughout the monitoring network during each year.

Figure IV-2
Carbon Monoxide Monitoring Trend in New Jersey, 1975-2013
Second Highest 8-Hour Values



New Jersey's two year carbon monoxide design values for the years 2006-2007 through 2012-2013 are shown in Appendix III Table 1. As shown in the Figure IV-2 and in Appendix III, the values are well below the standard of 9 ppm.

New Jersey commits to continued implementation of the Federal Prevention of Significant Deterioration (PSD) permitting program and all other Federal and State measures already implemented as part of the carbon monoxide SIP. These measures were included in previous SIP revisions [32, 33, 34], and are summarized in Table IV-1.

[32] NJ SIP Revision for the Attainment and Maintenance of the Carbon Monoxide NAAQS, November 15, 1992.
[33] NJ SIP Revision for the Attainment and Maintenance of the Carbon Monoxide NAAQS, Attainment Demonstration for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Nonattainment Area, August 7, 1998.
[34] NJ SIP Revision for the Attainment and Maintenance of the Carbon Monoxide NAAQS–Redesignation Request and Maintenance Plan for the New Jersey Portion of the New York-Northern New Jersey-Long Island Carbon Monoxide Nonattainment Area, January 10, 2002.

Table IV-1
New Jersey's Carbon Monoxide SIP Control Measures

Measure	Sector	Pollutant	New Jersey Administrative Code
1992 Carbon Monoxide SIP Commitments (1)			
Vehicle Inspection and Maintenance (IM) Program/Enhanced IM	Onroad	VOC, NOx, CO, PM2.5	7:27-15
Federal Motor Vehicle Control Program (Tier 1)	Onroad	PM2.5, SO2, NOx, CO, VOC	NA
Prevention of Significant Deterioration (PSD)	Stationary	PM2.5, SO2, NOx, VOC, CO	NA
Boilers	Stationary	VOC, CO	7:27-16.8
Stationary combustion turbines	Stationary	VOC, CO	7:27-16.9
Stationary reciprocating engines	Stationary	VOC, CO	7:27-16.10
Asphalt pavement production plants	Stationary	VOC, CO	7:27-16.11
Additional 1998/2002 Carbon Monoxide SIP Commitments			
National Low Emission Vehicle Program (NLEV)	Onroad	PM2.5, NOx, CO, VOC	NA
Federal Motor Vehicle Control Program (Tier 2)	Onroad	PM2.5, SO2, NOx, CO, VOC	NA
Federal Reformulated Gasoline (RFG)	Onroad	NOx, VOC, CO	NA
Federal Phase 1 of theSpark Ignition Small Engine Rule	Nonroad	NOx, VOC, CO	NA
Additional Post 2002 Carbon Monoxide Control Measures			
Federal Nonroad Rules:			
Diesel Marine Engines over 37 kW Category 1 Tier 2, Category 2 Tier 2, Category 3 Tier 1	Nonroad	NOx, VOC, CO	NA
Gasoline boats and personal watercraft, outboard engines	Nonroad	VOC, NOx, CO PM2.5	NA
Heavy-Duty Highway Rule - Vehicle Standards and Diesel Fuel Sulfur Control	Nonroad	PM2.5, NOx, CO, VOC, SO2	NA
Large Industrial Spark-Ignition Engines over 19 kW (>50 hp) Tier 1 and Tier 2	Nonroad	NOx, CO	NA
Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder Tier 2 and Tier 3	Nonroad	PM2.5, NOx, CO, VOC	NA
Nonroad Diesel Engine Standards and Diesel Fuel Sulfur Control	Nonroad	PM2.5, NOx, CO, VOC, SO2	NA
Phase 2 Standards for New Nonroad Spark-Ignition Nonhandheld Engines at or below 19 kW (lawn and garden)	Nonroad	NOx, VOC, CO	NA
Phase 2 Standards for Small Spark-Ignition Handheld Engines at or below 19 kW (lawn and garden)	Nonroad	NOx, VOC, CO	NA
Recreational Vehicles (includes snowmobiles, off-highway motorcycles, and all-terrain vehicles)	Nonroad	NOx, VOC, CO	NA
Federal Residential Woodstove NSPS	Stationary	PM, NOx, CO, VOC	NA

Notes:

1. Oxygenated gasoline was a control measure commitment in the 1992 SIP, but was replaced with other measures in the 1998 SIP.

2. Transportation Conformity

This proposed SIP revision includes a limited maintenance plan, therefore, transportation emissions will not be constrained, because it is unreasonable to expect that such an area would experience so much growth in that period that a violation of the carbon monoxide National Ambient Air Quality Standard would result. Under the limited maintenance plan, the NJDEP will use the interagency consultation process to inform the New Jersey Department of Transportation and Metropolitan Planning Organizations that:

1) Upon approval of the limited maintenance plans, carbon monoxide emission budgets will no longer be constraining for transportation conformity. Once the Limited Maintenance Plan is approved, regional transportation conformity is presumed to be satisfied, with no need for quantitative comparisons to budgets for the second ten-year maintenance period.

2) Project-level (hotspot) carbon monoxide evaluations of transportation projects (project-level conformity, as described in 40 CFR 93.116) are still applicable as part of environmental reviews.[35]

3. Monitoring Network and Verification of Continued Attainment

To verify that New Jersey remains in attainment for carbon monoxide, New Jersey will continue to operate an appropriate air monitoring network in New Jersey. New Jersey's current carbon monoxide air monitoring network is shown in Figure IV-3.

New Jersey will monitor the air quality for continued attainment of the carbon monoxide National Ambient Air Quality Standard, as required by the maintenance plan, by evaluating future monitoring data. New Jersey will review ambient carbon monoxide monitoring data as it becomes available to evaluate any risk of impending carbon monoxide standard violations as discussed further in the Contingency Plan.

The State will work with the USEPA each year through the air monitoring network review process, as required by 40 CFR Part 58 to determine: 1) the adequacy of the carbon monoxide monitoring network; 2) if additional air monitoring is needed; and 3) if/when sites can be discontinued or relocated. Due to the possibility of an unexpected occurrence affecting one or more of the monitoring sites, the State will work closely with the USEPA to either replace it or move the site to a new location, if necessary. Any changes to the monitoring network will be made through the air monitoring network review process. This review process undergoes a public notice period, usually in the May- June time period each year, and then is subject to approval by the USEPA. Air monitoring data will continue to be quality assured according to the requirements in the USEPA regulations.[36,37]

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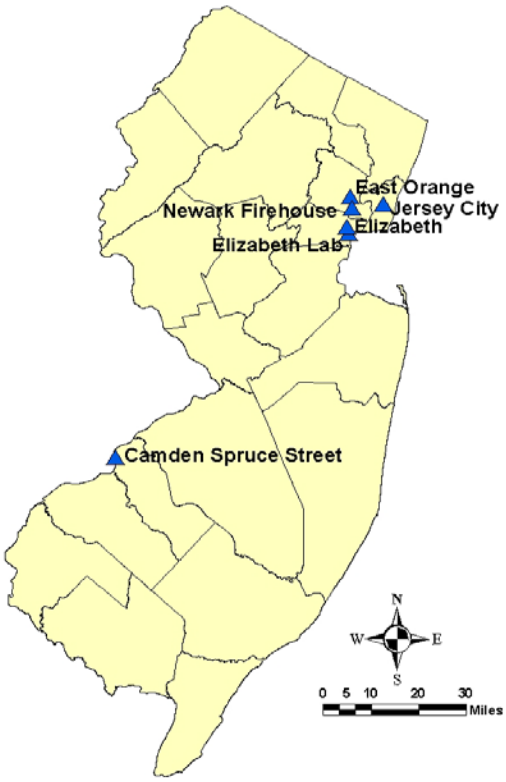
[35] Environmental review documents are prepared when required by the National Environmental Policy Act.
[36] 40 CFR 58.
[37] The State of New Jersey Air Monitoring website can be accessed at the following link: http://www.njaqinow.net/

Figure IV-3
New Jersey Carbon Monoxide Monitoring Network



B. Carbon Monoxide Monitoring Network Changes

To use its resources more prudently, and because of the low concentrations and downward carbon monoxide trend, the State has ceased monitoring for carbon monoxide in Burlington (340051001), Freehold (340252001), Morristown (340270003), and Perth Amboy (340232003). The NJDEP will continue monitoring for carbon monoxide at the nearby Camden (340070002) and Elizabeth Lab (340390004) sites. The NJDEP will use the Camden carbon monoxide data as a surrogate for Burlington and will use the Elizabeth Lab carbon monoxide data as a surrogate for Freehold, Morristown, and Perth Amboy.

The revised monitor plan was included in the State's 2010 and 2011 Annual Monitoring Network Plans, which underwent a public process. No public comments were received on the carbon monoxide portion of the plans.

C. Carbon Monoxide Contingency Plan

The Clean Air Act 42 U.S.C. §7505a(d) (Section 175A(d)) requires that maintenance plans include contingency provisions. The purpose of the contingency provisions is to assure that any violations of the National Ambient Air Quality Standard that occur after the redesignation of an area to attainment will be corrected promptly.

Contingency Measure Triggers

If design values in any maintenance area in New Jersey exceed 7.65 parts per million (ppm) (85% of the standard), the NJDEP will coordinate with USEPA to:

- Verify the validity of the data;
- Evaluate whether the data should be excluded based on an exceptional event or local traffic problem;
- Analyze available data regarding the air quality, meteorology, and related activities in the area to determine the cause of the exceedance;

If design values in any maintenance area in New Jersey show noncompliance with the 9 ppm standard, New Jersey will implement contingency measures, if warranted based on the data review, and if deemed necessary and appropriate.

Contingency Measures and Timeframes

The Clean Air Act 42 U.S.C. §7505a(d) (Section 175A(d)) requires that, at a minimum, a contingency plan include implementation of all measures that were contained in the SIP before redesignation of the area as an attainment area (if any measures were removed or reduced with USEPA approval.) No measures were removed or reduced as part of the carbon monoxide redesignation, therefore, all measures contained in the SIP before redesignation are either being implemented, or were replaced with equivalent measures (oxygenated gasoline was replaced with equivalent measures prior to redesignation).

In addition, the State commits to continue implementing a program to reduce idling emissions. The State will also rely on onroad vehicle fleet turnover from the existing State and Federal rules for motor vehicles. The turnover of the onroad fleet of cars and trucks will result in additional carbon monoxide emission reductions each year because the new vehicles have lower emission standards than the vehicles they are replacing. The rules for this measure are already promulgated and are already being implemented.

If it becomes necessary to further reduce carbon monoxide levels in the future, New Jersey will work with the local Transportation Planning Organizations or Metropolitan Planning Organizations to identify and implement transportation control measures such as Transportation Demand Management measures, signal improvement projects, bicycle projects, and various transit related projects as necessary. Since the implementation of potential contingency measures would not be expected to take place until well in the future, providing the specific details of the measures is not practicable. The most appropriate contingency measures may be significantly different from the measures mentioned above due to technological, societal or economic factors that are impossible to predict.