Appendix E.13 – Air Quality

NEC FUTURE
A Rail Investment Plan for the Northeast Corridor

Air Quality Effects Assessment Methodology

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1. Air Quality Effects Assessment Methodology

1.1 INTRODUCTION

This methodology explains how the Tier 1 Environmental Impact Statement (EIS) will address potential effects of the Tier 1 EIS Alternatives on air quality.

This methodology presents the regulatory framework, involved government agencies, expected regulatory and other outcomes of the Tier 1 EIS process and relevance to Tier 2, project-level assessments associated with the NEC FUTURE program. It also identifies the data sources, metrics and methods to be used to document existing conditions and analyze environmental consequences. This methodology may be revised as the NEC FUTURE program advances and new information is available.

Humans affect ambient air quality via production of air pollutants, including emissions by mobile and stationary sources. Emissions from transportation sources are generally referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. For the NEC FUTURE program, the Tier 1 EIS Alternatives, all of which require operation of electrically powered equipment, have the potential to affect air emissions and greenhouse gas emissions from operational changes in:

- Regional traffic (potential mode shift from autos to rail)
- Local traffic (potential shifts in traffic, particularly near station locations)
- Airplanes (potential mode shift from planes to rail)
- Power plants (potential changes in power requirements)

The summation of these changes will reflect the overall impact of the project on air quality and greenhouse gas (GHG) emissions.

1.2 DEFINITIONS

Air Quality: General term used to describe pollutant levels in the atmosphere. Individual air pollutants and GHG can harm human or animal health, reduce the productivity or vigor of crops or natural vegetation, damage property, contribute to climate change and degrade the atmosphere by reducing visibility.

Air Toxics*:* Air pollutants known or suspected to cause cancer or other serious health effects.

Attainment area: An area considered to have air quality as good as or better than the National Ambient Air Quality Standards (NAAQS) as defined in the Clean Air Act. An area may be an attainment area for one pollutant and a nonattainment area for others.

Clean Air Act (CAA): A federal law passed in 1963 and amended in 1967, 1970, 1974, 1977, and 1990, that forms the basis for the national air pollution control effort. Basic elements of the CAA

include NAAQS for major air pollutants, mobile and stationary control measures, air toxics standards, acid rain control measures and enforcement provisions.

Conformity: Conformity is required by the *Clean Air Act* to ensure that federal funding and approval are given to projects that are consistent with ("conform to") the air quality goals established by a state air quality implementation plan (SIP). The Final Conformity Rule implementing the Clean Air Act Amendments of 1990 (CAAA) (discussed in greater detail in Section 1.4) defines conformity as follows:

> *"Conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards; and that such activities will not cause or contribute to any new violation of any NAAQS in any area, increase the frequency or severity of any existing violation of any NAAQS in any area, or delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area."*

Criteria Air Pollutant: An air pollutant for which acceptable levels of exposure, based on human health and/or environmentally-based criteria, have been determined by the U.S. Environmental Protection Agency (USEPA) and for which a National Ambient Air Quality Standard (NAAQS) has been set.

Greenhouse Gases (GHG): Atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone and water vapor that slow the passage of re-radiated heat through the Earth's atmosphere.

Mobile Sources: Moving sources of pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats and airplanes.

National Ambient Air Quality Standards (NAAQS): The Clean Air Act requires USEPA to set National Ambient Air Quality Standards (set in 40 CFR Part 50) for pollutants considered harmful to public health and the environment. The *Clean Air Act* identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The USEPA periodically reviews new scientific data and may propose revisions to the standards as a result.

Nonattainment Area: A geographic area identified by the USEPA as not meeting the NAAQS for a given pollutant. An area may be a nonattainment area for one pollutant and an attainment area for others.

State Implementation Plan (SIP): A plan for each state which identifies how that state will attain and/or maintain the primary and secondary NAAQS and which includes federally-enforceable requirements. Each state is required to have a SIP which contains control measures and strategies which demonstrate how each area will attain and maintain the NAAQS.

Stationary Sources: Non-mobile sources of pollution such as power plants, refineries and manufacturing facilities which emit air pollutants.

Vehicle Miles Traveled (VMT): The total number of miles traveled by all vehicles for a specified period of time.

1.3 RELATED RESOURCES

The effects assessments from other resources evaluated as part of the Tier 1 EIS will be used as input to the air quality effects assessment; these related resources are identified in Table 1. Note that the effects assessments for those related resources will be documented within their respective Tier 1 EIS sections.

Table 1: Related Resource Inputs to Air Quality Assessment

Resource	Input to Air Quality
Transportation	▪ Identify potential changes in vehicle miles travelled (VMT), including those resulting from potential changes in local traffic, as an input to change in air quality and GHG emissions
Energy	▪ Determine net changes in energy consumption within the Affected Environment as a result of the Tier 1 EIS Alternatives and the potential effects on regional air quality.

Source: NEC FUTURE JV Team, 2014

1.4 AGENCY AND REGULATORY FRAMEWORK

The USEPA has set NAAQS for six principal pollutants, which are called criteria pollutants. These include carbon monoxide, lead, nitrogen dioxide, ozone, particle pollution and sulfur dioxide. In addition, federal agencies proposing actions subject to the *National Environmental Policy Act* of 1969 (NEPA) are required to evaluate the action's potential effects to air quality. Applicable legislation and regulations, listed in Table 2 will be considered, consistent with a Tier 1 level of assessment, in the evaluation of air quality for the NEC FUTURE program.

Table 2: Management and Regulation of Air Quality

Federal Agency	Statutory Authority & Regulatory Oversight	Description	Regulated Resource
United States Environmental Protection Agency (USEPA)	*Clean Air Act* (CAA) and subsequent Amendments (CAAA) and the Final Conformity Rule (40 CFR Parts 51 and 93)~~,~~	▪ Regulates the nation's air quality by setting standards for certain air pollutants and adopting emission control programs ▪ Amendments to the original CAA identify categories of air pollutants rather than individual sources.	Air pollutants
Federal Transit Administration	49 USC Chapter 53	▪ Requirement to comply with the CAA	Air pollutants

Source: NEC FUTURE JV Team, 2014

The primary federal legislation regulating air quality for this project is the *Clean Air Act* (CAA), as amended, and its implementing regulations in the Final Conformity Rule [40 CFR Parts 51 and 93]. Following the Clean Air Act Amendments (CAAA), the USEPA established the Final Conformity Rule to implement environmental policies and regulations with goals of maintaining acceptable levels of air quality. The CAAA and the Final Conformity Rule apply to proposed projects. According to Title I, Section 176 (c) 2 of the CAA:

> *No federal agency may approve, accept, or fund any transportation plan, program, or project unless such plan, program, or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this act. SIPs are the regulations and other materials for meeting clean air standards and associated Clean Air Act requirements.*

Transportation and general conformity regulations provide the framework for meeting the CAA requirements. Transportation conformity applies to Federal highway and transit projects, while general conformity applies to all other Federal actions. However, certain transportation projects can involve Federal actions that necessitate the evaluation of both transportation conformity and general conformity requirements.

Transportation conformity is required in areas designated nonattainment and maintenance by the USEPA for the transportation-related criteria pollutants. It applies to metropolitan transportation plan and transportation improvement program updates and amendments unless an amendment merely adds or deletes projects exempt from conformity (40 CFR 93.104(b) and (c)). Transportation conformity also applies to "FHWA/FTA projects", which are defined in the transportation conformity rule as "any highway or transit project which is proposed to receive funding assistance and approval through the Federal Aid Highway program or the Federal mass transit program, or requires Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) approval for some aspect of the project, such as connection to an Interstate highway or deviation from applicable design standards on the interstate system." (40 CFR 93.101)

General conformity applies to all Federal actions (e.g., funding, licensing, permitting or approving) that do not include FHWA/FTA projects as defined in 40 CFR 93.101 and that take place in nonattainment or maintenance areas for all criteria pollutants.

General conformity also applies to Federal highway and transit projects that do not involve either Title 23 or 49 funding or FHWA or FTA approval such as connection to an Interstate highway or deviation from applicable design standards per 40 CFR 93.101.

Federal departments and agencies are prohibited from taking actions in nonattainment and maintenance areas unless they first demonstrate that the actions would conform to the SIP as it applies to criteria pollutants.

Conformity addresses only those criteria pollutants for which the area is in nonattainment or maintenance status. Nonattainment designations change over time and an agency must determine conformity on a project-level basis during the Tier 2 NEPA process.

Through the CAAA, metropolitan planning organizations (MPOs) are responsible for the planning, programming and coordination of federal highway and transit investments in urbanized areas. As part of this work, MPOs help to ensure that the transportation and air quality plans of the region are consistent with goals established in the SIP. The MPOs responsible for air quality within the Study Area are listed in Table 3.

Table 3: Metropolitan Planning Organizations within the Study Area

Jurisdiction	Regulatory Oversight
Washington, D.C.	▪ Metropolitan Washington Council of Governments (MWCOG)
Maryland	▪ Baltimore Regional Transportation Board (BRTB)
Delaware	▪ Wilmington Area Planning Commission (WILMAPCO)
Pennsylvania	▪ Delaware Valley Regional Planning Commission (DVRPC)
New Jersey	▪ Delaware Valley Regional Planning Commission (DVRPC) ▪ South Jersey Transportation Planning Organization (SJTPO) ▪ North Jersey Transportation Planning Authority (NJTPA)
New York	▪ New York Metropolitan Transportation Council (NYMTC)
Connecticut	▪ Housatonic Valley Council of Elected Officials (HVCEO) ▪ Council of Governments of Naugatuck Valley (COGNV) ▪ South Central Regional Council of Governments (SCRCOG) ▪ Connecticut River Estuary Regional Planning Agency (CRERPA) ▪ Central Connecticut Regional Planning Agency (CCRPA) ▪ Capitol Region Council of Governments (CRCOG) ▪ Midstate Regional Planning Agency (MRPA) ▪ Windham Regional Council of Governments (WINCOG) ▪ Southeastern Connecticut Council of Governments (SCCOG) ▪ Southeastern Regional Planning and Economic Development District (SRPEDD) ▪ Northeastern Connecticut Council of Governments (NECCOG)
Rhode Island	▪ State Planning Council (SPC)
Massachusetts	▪ Central Massachusetts Metropolitan Planning Organization (CMMPO) ▪ Pioneer Valley Planning Commission (PVMPO) ▪ Boston Regional Metropolitan Planning Organization (Boston Region MPO)

Source: NEC FUTURE JV Team, 2014

National Ambient Air Quality Standards

As required by the CAAA, NAAQS currently exist for six major air pollutants as presented in Table 4. These pollutants are carbon monoxide; nitrogen dioxide; ozone; particulate matter, classified into two categories: particles with an aerodynamic diameter of 10 micrometers or less (PM_{10}) and particles with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$); sulfur dioxide; and lead. “Primary” standards have been established to protect the public health. “Secondary” standards are intended to protect the nation's welfare and account for air pollutant effects on animals, soil, water, visibility, materials, vegetation and other aspects of the general welfare. These pollutants are often referred to as “criteria” pollutants because the CAAA have established standards for them.

Table 4: National Ambient Air Quality Standards

Pollutant [Final Rule citation]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294; Aug. 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66964; Nov. 12, 2008]		primary and secondary	Rolling 3 month average	0.15 µg/m^3(1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474; Feb. 9, 2010] [61 FR 52852; Oct. 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		primary and secondary	Annual	53 ppb(2)	Annual mean
Ozone [73 FR 16436; Mar. 27, 2008]		primary and secondary	8-hour	0.075 ppm(3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [Dec. 14, 2012]	$PM_{2.5}$	primary	Annual	12 µg/m^3	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520; June 22, 2010] [38 FR 25678; Sept. 14, 1973]		primary	1-hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA Office of Air and Radiation, *www.epa.gov/air/criteria.html* (updated December 14, 2012).

Notes: ppm = parts per million; ppb = parts per billion; std = standard; µg/m^3 = micrograms per cubic meter.

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over three years) and related implementation rules remain in place. In 1997, USEPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO_2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Attainment Status

The CAAA requires that the USEPA publish a list of all geographic areas in compliance with the NAAQS, plus those not attaining the NAAQS. Areas not in NAAQS compliance are deemed nonattainment areas for the specific criteria pollutant(s). Areas that have insufficient data to make a determination are deemed unclassified, and are treated as being attainment areas until proven otherwise. Maintenance areas are areas that were previously designated as nonattainment for a particular pollutant, but have since demonstrated compliance with the NAAQS for that pollutant. An area's designation is based on the data collected by the state monitoring network on a pollutant-by-pollutant basis.

Mobile Source Air Toxics

The USEPA also regulates air toxics with source standards. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g. airplanes), area sources (e.g. dry cleaners), and stationary sources (e.g., factories or refineries).

Greenhouse Gas Emissions

The federal government's past efforts to reduce GHG emissions have focused on reducing stationary source emissions and improving overall mobile source vehicle fleet fuel economy.

In September 2009, the USEPA published the final rule regarding Greenhouse Gas Reporting Program (74 FR 56260). This rule requires mandatory reporting of GHG emissions from large sources in the United States. The gases covered by the final rule are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and other fluorinated gases including nitrogen trifluoride (NF_3) and hydrofluorinated ethers (HFE).

In December 2009, the Final Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA was signed. The endangerment finding states that, current and projected concentrations of the six key well-mixed GHGs in the atmosphere—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—threaten the public health and welfare of current and future generations. Furthermore, it states that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to greenhouse gas pollution, which threatens public health and welfare. The USEPA and the U.S. Department of Transportation's National Highway Traffic Safety Administration finalized the latest emission standards for light-duty vehicles, model year 2017 and beyond, that will reduce GHG emissions by increasing fuel economy to 54.5 mpg by model year 2025.

Currently there are no NAAQS or emission thresholds regarding GHG emissions from mobile source operations.

1.4.1 Regulatory Compliance

No formal agency approvals would be requested with the Tier 1 EIS. The air quality compliance requirements for subsequent Tier 2 evaluation will be described in the Tier 1 EIS. During the Tier 1 EIS process, the FRA will initiate dialogue with the USEPA to identify potential opportunities to streamline subsequent environmental reviews. Section 1.7 of this methodology identifies initial feedback received from USEPA with regard to the approach to the Tier 1 and Tier 2 air quality analyses. Although requirements to make a conformity determination would not apply at the Tier 1 level, such requirements would need to be addressed for subsequent Tier 2 project-level assessments. The applicability of transportation and/or general conformity for Tier 2 projects would be determined by the FRA in consultation with the Federal Transit Administration (FTA), and the USEPA, during a Tier 2 process as outlined in the NEC FUTURE's Agency Coordination Plan and support the Statement of Principles established between the FRA and federal regulatory agencies as part of the Council on Environmental Quality Pilot program.

1.5 METHODOLOGY TO ASSESS EFFECTS

This methodology identifies the approach and assumptions for describing existing conditions of air quality and environmental consequences of the Tier 1 EIS Alternatives. The methodology identifies data sources, defines the Affected Environment considered for air quality, and presents the methods for evaluating potential direct effects to air quality. Indirect effects,[1] such as those resulting from induced growth as a result of implementation of the Tier 1 EIS Alternatives will be addressed in a separate methodology (see Indirect Effects Assessment Methodology).

1.5.1 Existing Conditions

The data sources listed in Table 5 will be used to establish the existing conditions for air quality.

The existing conditions for air quality will be documented in the Tier 1 EIS for the established Affected Environment. The Affected Environment for air quality includes the areas administered by the MPOs within the Study Area as identified in Table 3. The methodology focuses on MPOs and non-attainment and maintenance areas to support possible transportation and general conformity determinations (non-attainment and maintenance areas may be all or part of an MPO-administered area).

Existing ambient air quality and GHG emissions data for the Affected Environment will be collected and summarized. The current status of MPO-administered areas within the Affected Environment will be described with regard to ambient air quality standards and USEPA's Final Conformity Rule. GHG emissions will be collected from the U.S. Department of Energy for the Affected Environment. The USDOE GHG emissions information is available on a statewide basis. Information will be presented in a tabular format and broken down by county for each state, as available.

Table 5: Potential Data Sources for the Evaluation of Air Quality

Agency Source	Potential Data Source	Data Application
FRA	▪ Alternatives ▪ Operational Specifications (train schedule, engine types, electrical requirements, etc.) ▪ Fuel usage information (R-1 reports)	▪ Power requirements for the regional emissions analysis
FTA	▪ Intermodal Connectivity (i.e., operational changes in feeder service or other FTA services linked to the NEC)	▪ Localized analysis ▪ Regional analysis
USEPA	▪ Attainment Status and air quality standards ▪ Existing ambient air quality monitoring data ▪ Modeling parameters and guidance ▪ Motor Vehicle Emission Simulator (MOVES) emission rates for on-road vehicles ▪ Fuel usage information ▪ eGRID emission factors ▪ NONROAD emission rates for locomotives	▪ Existing conditions ▪ Criteria pollutant emission factors for the regional emissions analysis ▪ Greenhouse gas analysis

[1] Indirect effects are those that occur later in time or are further removed in distance (40 CFR § 1508.8).

Agency Source	Potential Data Source	Data Application
United States Department of Energy (USDOE)	▪ Statewide Energy profile data ▪ Statewide Energy usage data ▪ Statewide Fuel usage information	▪ Existing conditions ▪ Greenhouse gas analysis ▪ Regional emissions analysis
State and Local Agencies	▪ Climate information ▪ Modeling parameters and guidance (MOVES inputs) ▪ SIP and TIP status ▪ Local thresholds/standards ▪ Construction regulations/best management practices	▪ Existing conditions ▪ Emission factors for the regional emissions analysis ▪ Localized analysis

Source: NEC FUTURE JV, 2014

1.5.2 Environmental Consequences

Environmental consequences will be assessed for the Affected Environment. The analysis of potential effects of the Tier 1 EIS Alternatives on air quality will be based on 1) a qualitative assessment of SIPs; 2) identification of construction related emission sources, and 3) identification of changes to air quality, including changes in GHG emissions.

The following steps will be undertaken to evaluate the effects of the Tier 1 EIS Alternatives on air quality:

1. Provide a preliminary assessment regarding the consistency of the Tier 1 EIS Alternatives with the applicable parts of each area's SIP.
2. Identify the potential for impacts to air quality on a regional level as described in greater detail below.
3. For the regional level analysis, discuss the public health effects associated with changes or increases in air emissions[2].
4. Qualitatively discuss localized impacts based upon potential station locations, inter-regional traffic projections and operating plans.
5. Qualitatively discuss potential impacts from changes in air travel.
6. Estimate on a regional basis, the potential change in GHG emissions.
7. Qualitatively discuss potential emission sources related to the construction of the Tier 1 Alternatives, including public health effects on construction workers and the general public.

[2] Public health effects are also examined within the analyses for other resources (EJ, Noise and Vibration, Hazardous Materials and EMF/EMI).

Regional Analysis

The regional analysis will examine if program-related changes in pollutant emissions would be consistent with applicable state air quality implementation plans. Potential regional air quality effects of the Tier 1 EIS Alternatives will be evaluated based on a comparison of their impacts on overall air quality emission burdens. In addition, the impact of these changes on maintenance and non-attainment areas, as classified by USEPA at the time of analysis, will be discussed. Potential regional pollutant burdens will be estimated as a function of change in regional VMT with the Tier 1 EIS Alternatives. Vehicle emission factors will be calculated using USEPA's latest version of the approved mobile source emissions modeling program, currently MOVES2010b, which estimates emissions for mobile sources covering a broad range of pollutants, GHG and energy. This analysis considers the Corporate Average Fuel Economy (CAFE) standards of vehicles, GHG vehicle emissions standards, as well as the addition of alternative fueled vehicles to the future vehicle mix, thereby accounting for more fuel-efficient and less polluting vehicles in the future. Currently the program incorporates the CAFE standards for the 2008-2011 new vehicle fleets. As updates are available, the FRA will review and incorporate these latest revisions. To the extent data are available, changes in air traffic, as well as the changes in rail power or fuel requirements for the Tier 1 EIS Alternatives, will also be quantitatively analyzed and incorporated into this analysis.[3]

Local Analysis

To examine the Tier 1 EIS Alternatives' potential impacts on local air quality, a qualitative analysis will be conducted based on potential changes in VMT, as a result of estimated changes in local traffic due to potential station locations, changes in rail service and location of parking facilities. In addition, data from inter-regional traffic study areas, as shown in Table 6, will be qualitatively discussed in terms of potential air quality impacts.

Table 6: Inter-Regional Areas

From/ To	Region	Geographic Boundaries	A	B	C	D	E	F	G	H	I	J
A	Washington Metro	Northern Virginia to Patuxent River	R1	IR	IR	IR	IR	IR	IR	IR	IR	IR
B	Baltimore Metro	Patuxent River to Susquehanna River	IR	R2	IR	IR	IR	IR	IR	IR	IR	IR
C	Wilmington/ Philadelphia Metro	Susquehanna River to Trenton	IR	IR	R3	IR	IR	IR	IR	IR	IR	IR
D	New York Metro, west of Hudson	Trenton to New York City	IR	IR	IR	R4	IR	IR	IR	IR	IR	IR
E	New York Metro, east of Hudson	Manhattan, Mid-Hudson, Coastal CT, Long Island	IR	IR	IR	IR	R5	IR	IR	IR	IR	IR
F	Providence/ Boston Metro	Rhode Island to New Hampshire	IR	IR	IR	IR	IR	R6	IR	IR	IR	IR
G	Empire Corridor	New York City to Albany	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR

[3] Energy requirements will be estimated separately and are addressed in the Energy Methodology.

From/ To	Region	Geographic Boundaries	A	B	C	D	E	F	G	H	I	J
H	Inland Connecticut/ Massachusetts	New Haven to Springfield	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR
I	Virginia	Richmond to Washington, D.C.	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR
J	Keystone	Philadelphia to Harrisburg	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR

Source: NEC FUTURE Market Analysis and Forecasting Methodology Report, October 15, 2012

Key:

IR – Inter-Regional Forecasting Model

R1 – Metropolitan Washington Council of Governments Regional Forecasting Model (VRE/MARC, commuter rail operators)

R2 – Baltimore Metropolitan Council Regional Forecasting Model (MARC)

R3 – Delaware Valley Regional Planning Commission Forecasting Model (SEPTA)

R4 – North Jersey Transportation Planning Authority Regional Forecasting Model (NJ TRANSIT)

R5 – New York Metropolitan Transportation council Best Practices Model (New York MT – LIRR, Metro-North, and Shore Line East

R6 – Central Transportation Planning Staff Forecasting Model (MBTA)

Greenhouse Gas Analysis

Greenhouse gas emissions will be evaluated on a mesoscale level since their impact is on a more regional scale than other pollutants. For the GHG analysis, the potential sources of energy consumption that may be affected by the Tier 1 EIS Alternatives, such as automobile VMT, airplane flights, and power requirements for train propulsion, will be identified based on available information. The potential changes to these sources due to the Tier 1 EIS Alternatives will be estimated. A comparison will be made between the Tier 1 EIS Alternatives and the No Action Alternative in terms of potential changes in greenhouse gas emissions[4].

Roadway emission burdens will be calculated using emission rate information obtained through the most current version of MOVES, USEPA's mobile source emissions modeling program, along with VMT estimates for the Tier 1 EIS Alternatives. The MOVES model estimates emissions for mobile sources covering a broad range of pollutants and GHG emissions. The program takes into account the CAFE standards for vehicles, GHG vehicle emissions standards, as well as the addition of alternative fueled vehicles to the future vehicle mix, thereby accounting for more fuel-efficient and less polluting vehicles in the future. Currently, the program incorporates the CAFE standards for the 2008-2011 new vehicle fleets. The program is regularly updated to reflect new regulations and standards.

Emission burden changes due to power requirements of the Tier 1 EIS Alternatives will be evaluated. Emission factors from USEPA's Emissions & Generation Resource Integrated Database (eGRID) will be used for the GHG analysis. eGRID is a comprehensive inventory of environmental attributes of electric power systems; it is based on available plant-specific data for all U.S. electricity generating plants that provide power to the electric grid. Although eGRID emission factors are based on the current energy profile of a region, future GHG emissions can be revised depending

[4] Climate change effects associated with Sea Level Rise, Storm Surge, or Extreme Heat Events will also be described in the Tier 1 EIS. The approach to evaluating climate change effects is described in a separate Climate Change Effects Methodology.

upon an area's requirements and/or regulations for a certain percentage of renewable energy in the future.

Public Health Effects from Construction Activities

Temporary construction-related effects to air quality will be qualitatively discussed with regard to the types of equipment that may be used and duration of construction activities that would impact air quality. The Construction Effects section of the Tier 1 EIS will also include a qualitative description of the potential health effects of the Tier 1 EIS Alternatives on construction workers and surrounding communities as a result of fugitive dust and diesel emissions. Atmospheric dust arises from the mechanical disturbance of granular material exposed to air. The type of dust which is generated from these open sources is termed "fugitive" because it is not discharged to the atmosphere in a confined flow stream. Common sources of fugitive dust include unpaved roads, agricultural tilling operations, aggregate storage piles and heavy construction operations. As part of Tier 2 analysis, fugitive dust control plans, personnel protection, workplace monitoring, alternative designs and methods of construction would be developed to minimize health effects from dust and diesel emissions.

1.5.3 Mitigation Strategies

A menu of potential mitigation measures will be developed on a programmatic scale for further consideration in Tier 2. Examples of programmatic mitigation measure for air quality include the incorporation of Environmental Performance Measures in Tier 2 Alternatives (see Section 1.7), voluntary emission reduction agreements or use of energy efficient or low-emissions equipment.

1.6 TIER 1 EIS OUTCOMES

The Tier 1 EIS air quality assessment will:

- Quantify regional air quality effects for each of the Tier 1 EIS Alternatives based on a comparison of their impacts on overall air quality emission burdens. In addition, the impact of these changes on maintenance and non-attainment areas, as classified by USEPA at the time of analysis, will be discussed.
- Assess consistency of each of the Tier 1 EIS Alternatives with applicable SIPs.
- Qualitatively discuss changes in localized air quality emissions based upon potential station locations, inter-regional traffic projections and operating plans. Qualitatively discuss potential impacts from changes in air travel.
- Qualitatively compare potential net changes in GHG emissions and energy consumption among the Tier 1 EIS Alternatives, which may affect air quality as described in Table 4.
- Qualitatively discuss potential emissions sources related to the construction methods and activities of the Tier 1 EIS Alternatives including public health effects on construction workers and the general public.

Detailed information related to construction staging, phasing and scheduling is not available for the construction analysis in the Tier 1 EIS. This type of analysis is expected in the Tier 2 project-level documents once schedule and equipment needs are known.

1.7 APPLICABILITY TO TIER 2 ASSESSMENTS

The FRA would identify ways in which agency coordination during the Tier 1 process could create efficiencies and help streamline subsequent Tier 2 approvals. For example, if regional effects of Tier 1 EIS Alternatives with regard to air quality and GHG emissions are within established thresholds, the FRA would coordinate with USEPA to determine whether or not aspects of the Tier 1 analyses could be applied to project-level analyses.

Based on initial discussions, the USEPA has recommended FRA consider suggesting the idea of Environmental Performance Measures within the Tier 1 EIS. For example, the Tier 1 EIS could include a statement recommending Tier 2 projects incorporate the following as environmental commitments: layover areas using shore power, indoor overnight train storage, and new equipment having the highest available air quality ratings.

Project-level Tier 2 analyses would include more detailed evaluation of site-specific air quality impacts where appropriate, including potential microscale dispersion modeling to compare local air quality levels to applicable NAAQS. Required transportation or general conformity analyses and any necessary determinations would be completed during Tier 2.

Application of Effects-Assessment Methodology

13.1 AIR QUALITY: APPLICATION OF EFFECTS-ASSESSMENT METHODOLOGY

13.1.1 Variations to Effects-Assessment Methodology

The following variations from the Effects-Assessment Methodology occurred during the process of developing the Tier 1 Draft EIS analysis:

- The FRA analyzed the changes in emission burdens caused by the Action Alternatives relative to the No Action Alternative, rather than separate baseline emissions burdens associated with each Alternative (the No Action and Action Alternatives). This variation in how emission burdens were calculated was a result of the service data being presented as changes between the No Action and Action Alternatives rather than separate service data for the No Action and Action Alternatives.
- Availability of data (vehicle-miles traveled [VMT] and rail information) on a statewide basis determined the parameters for the MOVES runs and emission factors used for the train analysis.
- Changes in intercity bus trips were analyzed qualitatively (alongside changes in aircraft trips).
- To account for the future renewable energy targets of each state, a future energy profile analysis was conducted. This analysis was done by taking the difference between the current and future renewable energy profile percentages, as shown in Table 1. The resulting percentage was then directly applied to the current emission rates to account for the increased future renewable energy percentage of each area's energy profile. Future renewables were assumed to have a zero emission profile.

Table 1 Renewable Energy Targets by State

Geography	Current Percentage of Renewable Energy	Percentage Renewable Energy Target	Percentage Increase Applied to Current Profile
D.C.	0%	20%	20%
MD	5%	20%	15%
DE	0%	25%	25%
PA	2%	18%	16%
NJ	0%	25%	24%
NY	20%	50%	30%
CT	1%	27%	26%
RI	0%	16%	16%
MA	3%	20%	17%

Sources: Egrid *http://www.epa.gov/cleanenergy/documents/egridzips/eGRID_9th_edition_V1-0_year_2010_Summary_Tables.pdf*
National Conference of State Legislatures, State Renewable Portfolio Standards and Goals - *http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx*

13.1.2 Data Variations

The following variations from the identified data sources in the Effects-Assessment Methodology occurred during the process of developing the Tier 1 Draft EIS analysis:

- Current attainment status for each county in the affected environment was obtained from the U.S. Environmental Protection Agency (EPA), as was the area's primary source of pollution (per pollutant). State-specific national level runs of EPA's MOVES2010b program were conducted to determine the changes in criteria pollutant and greenhouse gas (GHG) emission burdens due to changes in roadway VMT.
- In addition to providing the current attainment status for each county in the Affected Environment, each area's primary source of pollution (per pollutant) was provided in table format.
- MOVES2010b was run using state-specific national level runs of EPA's MOVES2010b since the VMT data was generated on a statewide basis. The MOVES outputs were used to determine the changes in criteria pollutant and GHG emission burdens due to changes in roadway VMT (from the No Action to the Action Alternatives).
- Criteria pollutant and GHG emission factors for supplying the energy requirements for the electric trains, by state, were obtained through the EPA's National Emission Inventory Data and eGRID. Criteria pollutant emission factors and GHG emission factors for diesel trains were calculated using the EPA's Emission Factors for Locomotives (EPA-420-F-09-025). In addition, the emission burden changes due to changes in train miles traveled (electric) under the project alternatives were calculated to account for a future electrical profile which takes into account a larger percentage of renewable resources in their energy profile than currently present. Percentages were taken from National Conference of State Legislatures, *State Renewable Portfolio Standards and Goals* - *http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx*

13.1.3 Criteria for Analysis

Existing Conditions

- For each county, attainment status and primary sources of pollutants were presented in table format.

Environmental Consequences

- Changes in emission burdens due to changes in roadway VMT, diesel trains and electrical trains were calculated and summarized on a statewide basis.
- The emission burden changes due to changes in roadway VMT under the project alternatives were calculated per state using state-specific national level runs of EPA's MOVES2010b program.
- The emission burden changes due to changes in train mile traveled (diesel) under the project alternatives were calculated using EPA's Emission Factors for Locomotives (EPA-420-F-09-025).
- The emission burden changes due to changes in train miles traveled (electric) under the project alternatives were calculated using EPA's National Emission Inventory Data and eGRID.
- The emission burden changes due to changes in train miles traveled (electric) under the project alternatives were additionally calculated to account for a future electrical profile which takes into account a larger percentage of renewable resources in their energy profile than currently

present. Percentages were taken from National Conference of State Legislatures, *State Renewable Portfolio Standards and Goals* - *http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx.*

- For each state, the emission burden changes due to changes in roadway VMT and train miles traveled were combined to determine each Action Alternative's overall impact on air quality and greenhouse gases within the state.
- Changes in intercity bus trips were analyzed qualitatively (alongside changes in aircraft trips).

Environmental Consequences – Stations

- Air Quality was not analyzed at the stations level.

Data Matrices

Total Reduction in Annual VMT over No Action - Allocated to States

State*	Alternative 1	Alternative 2	Alternative 3			
			via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)
NJ	-325,264,333	-440,215,509	-485,904,713	-458,627,573	-502,128,681	-474,110,845
CT	-148,091,309	-200,428,034	-221,230,113	-208,810,960	-228,616,809	-215,860,420
PA	-125,837,990	-170,310,203	-187,986,404	-177,433,447	-194,263,119	-183,423,602
NY	-285,014,612	-385,741,196	-425,776,606	-401,874,866	-439,992,945	-415,442,165
NH	-15,162,855	-20,521,537	-22,651,431	-21,379,852	-23,407,744	-22,101,636
MA	-90,674,552	-122,719,708	-135,456,574	-127,852,474	-139,979,360	-132,168,775
RI	-28,632,402	-38,751,336	-42,773,270	-40,372,115	-44,201,435	-41,735,078
DE	-8,115,378	-10,983,422	-12,123,372	-11,442,805	-12,528,162	-11,829,114
MD	-119,707,868	-162,013,645	-178,828,760	-168,789,884	-184,799,709	-174,488,232
DC	-27,070,805	-36,637,857	-40,440,437	-38,170,240	-41,790,711	-39,458,867
VA	-105,134,373	-142,289,753	-157,057,760	-148,241,038	-162,301,792	-153,245,657
WV	-1,944,543	-2,631,760	-2,904,906	-2,741,834	-3,001,899	-2,834,398
Total	-1,280,651,019	-1,733,243,960	-1,913,134,347	-1,805,737,090	-1,977,012,365	-1,866,698,791

*The state allocations include only the portion of states within the study area.

Difference in Annual VMT over Existing (2013) - Allocated to States

State*	Alternative 1	Alternative 2	Alternative 3			
			via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)
NJ	3,601,491,268	3,486,540,092	3,440,850,887	3,468,128,027	3,424,626,919	3,452,644,756
CT	1,639,741,903	1,587,405,177	1,566,603,099	1,579,022,252	1,559,216,403	1,571,972,792
PA	1,393,341,892	1,348,869,678	1,331,193,478	1,341,746,434	1,324,916,763	1,335,756,279
NY	3,155,825,999	3,055,099,416	3,015,064,006	3,038,965,746	3,000,847,667	3,025,398,447
NH	167,890,802	162,532,120	160,402,225	161,673,804	159,645,912	160,952,020
MA	1,003,994,518	971,949,362	959,212,496	966,816,596	954,689,710	962,500,295
RI	317,032,444	306,913,510	302,891,576	305,292,731	301,463,411	303,929,768
DE	89,857,577	86,989,533	85,849,583	86,530,150	85,444,793	86,143,841
MD	1,325,466,083	1,283,160,307	1,266,345,191	1,276,384,067	1,260,374,243	1,270,685,719
DC	299,741,649	290,174,597	286,372,017	288,642,214	285,021,743	287,353,587
VA	1,164,100,974	1,126,945,594	1,112,177,587	1,120,994,309	1,106,933,555	1,115,989,690
WV	21,530,959	20,843,741	20,570,595	20,733,667	20,473,603	20,641,103
Total	14,180,016,068	13,727,423,128	13,547,532,741	13,654,929,998	13,483,654,722	13,593,968,297

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2013	9	1	CONNECTICUT	Total Gaseous Hydrocarbons	0.1371032	0.1104364
2013	9	87	CONNECTICUT	Volatile Organic Compounds	0.1320846	0.1066226
2013	9	110	CONNECTICUT	PM25	0.0448880	0.0201427
2013	9	5	CONNECTICUT	Methane (CH4)	0.0085285	0.0065217
2013	9	98	CONNECTICUT	CO2 Equivalent	504.2949490	413.0533463
2013	9	115	CONNECTICUT	Primary PM2.5 - Sulfate Particulate	0.0000961	0.0000391
2013	9	31	CONNECTICUT	Sulfur Dioxide (SO2)	0.0065193	0.0059866
2013	9	102	CONNECTICUT	Primary PM10 - Elemental Carbon	0.0225757	0.0037824
2013	9	2	CONNECTICUT	Carbon Monoxide (CO)	3.4742295	3.4173383
2013	9	90	CONNECTICUT	Atmospheric CO2	502.9807298	411.7813077
2013	9	111	CONNECTICUT	Primary PM2.5 - Organic Carbon	0.0163344	0.0110570
2013	9	6	CONNECTICUT	Nitrous Oxide (N2O)	0.0036676	0.0036671
2013	9	100	CONNECTICUT	PM10	0.0659096	0.0371014
2013	9	79	CONNECTICUT	Non-Methane Hydrocarbons	0.1285747	0.1039148
2013	9	105	CONNECTICUT	Primary PM10 - Sulfate Particulate	0.0001005	0.0000421
2013	9	3	CONNECTICUT	Oxides of Nitrogen (NOx)	1.0814627	0.5642868
2013	9	112	CONNECTICUT	Primary PM2.5 - Elemental Carbon	0.0218293	0.0035940
2013	9	30	CONNECTICUT	Ammonia (NH3)	0.0320705	0.0324446
2013	9	101	CONNECTICUT	Primary PM10 - Organic Carbon	0.0173600	0.0119562
2013	10	6	DELAWARE	Nitrous Oxide (N2O)	0.0037521	0.0037320
2013	10	100	DELAWARE	PM10	0.0620538	0.0352151
2013	10	79	DELAWARE	Non-Methane Hydrocarbons	0.1232059	0.0987641
2013	10	105	DELAWARE	Primary PM10 - Sulfate Particulate	0.0000932	0.0000417
2013	10	3	DELAWARE	Oxides of Nitrogen (NOx)	1.0039628	0.5550447
2013	10	112	DELAWARE	Primary PM2.5 - Elemental Carbon	0.0194383	0.0032548
2013	10	30	DELAWARE	Ammonia (NH3)	0.0316065	0.0319164
2013	10	101	DELAWARE	Primary PM10 - Organic Carbon	0.0149535	0.0094184
2013	10	1	DELAWARE	Total Gaseous Hydrocarbons	0.1313522	0.1048954
2013	10	87	DELAWARE	Volatile Organic Compounds	0.1265809	0.1013548
2013	10	110	DELAWARE	PM25	0.0405397	0.0177304
2013	10	5	DELAWARE	Methane (CH4)	0.0081462	0.0061311
2013	10	98	DELAWARE	CO2 Equivalent	491.4772539	411.0455438
2013	10	115	DELAWARE	Primary PM2.5 - Sulfate Particulate	0.0000890	0.0000388
2013	10	31	DELAWARE	Sulfur Dioxide (SO2)	0.0063905	0.0059203
2013	10	102	DELAWARE	Primary PM10 - Elemental Carbon	0.0200944	0.0034148
2013	10	2	DELAWARE	Carbon Monoxide (CO)	3.1812608	3.0906884
2013	10	90	DELAWARE	Atmospheric CO2	490.1447731	409.7614662
2013	10	111	DELAWARE	Primary PM2.5 - Organic Carbon	0.0141157	0.0087213
2013	11	1	DISTRICT OF COLUMBIA	Total Gaseous Hydrocarbons	0.1239233	0.0971212
2013	11	87	DISTRICT OF COLUMBIA	Volatile Organic Compounds	0.1194933	0.0939406
2013	11	110	DISTRICT OF COLUMBIA	PM25	0.0406515	0.0198866
2013	11	5	DISTRICT OF COLUMBIA	Methane (CH4)	0.0076376	0.0056050
2013	11	98	DISTRICT OF COLUMBIA	CO2 Equivalent	507.8261759	438.9535294
2013	11	115	DISTRICT OF COLUMBIA	Primary PM2.5 - Sulfate Particulate	0.0000833	0.0000410
2013	11	31	DISTRICT OF COLUMBIA	Sulfur Dioxide (SO2)	0.0066783	0.0062642
2013	11	102	DISTRICT OF COLUMBIA	Primary PM10 - Elemental Carbon	0.0179714	0.0035043
2013	11	2	DISTRICT OF COLUMBIA	Carbon Monoxide (CO)	3.1120026	3.0042059
2013	11	90	DISTRICT OF COLUMBIA	Atmospheric CO2	506.2622289	437.4444716
2013	11	111	DISTRICT OF COLUMBIA	Primary PM2.5 - Organic Carbon	0.0144977	0.0092156
2013	11	6	DISTRICT OF COLUMBIA	Nitrous Oxide (N2O)	0.0045327	0.0044928
2013	11	100	DISTRICT OF COLUMBIA	PM10	0.0672423	0.0418921
2013	11	79	DISTRICT OF COLUMBIA	Non-Methane Hydrocarbons	0.1162857	0.0915161
2013	11	105	DISTRICT OF COLUMBIA	Primary PM10 - Sulfate Particulate	0.0000875	0.0000441
2013	11	3	DISTRICT OF COLUMBIA	Oxides of Nitrogen (NOx)	0.8721977	0.4928613
2013	11	112	DISTRICT OF COLUMBIA	Primary PM2.5 - Elemental Carbon	0.0173759	0.0033394
2013	11	30	DISTRICT OF COLUMBIA	Ammonia (NH3)	0.0323756	0.0325847
2013	11	101	DISTRICT OF COLUMBIA	Primary PM10 - Organic Carbon	0.0153653	0.0099405

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2040	9	1	CONNECTICUT	Total Gaseous Hydrocarbons	0.0399099	0.0293822
2040	9	87	CONNECTICUT	Volatile Organic Compounds	0.0332667	0.0257978
2040	9	110	CONNECTICUT	PM25	0.0158775	0.0136309
2040	9	5	CONNECTICUT	Methane (CH4)	0.0074866	0.0042402
2040	9	98	CONNECTICUT	CO2 Equivalent	414.1005791	312.6509842
2040	9	115	CONNECTICUT	Primary PM2.5 - Sulfate Particulate	0.0000824	0.0000287
2040	9	31	CONNECTICUT	Sulfur Dioxide (SO2)	0.0051284	0.0045381
2040	9	102	CONNECTICUT	Primary PM10 - Elemental Carbon	0.0012777	0.0012410
2040	9	2	CONNECTICUT	Carbon Monoxide (CO)	1.9717734	1.9288308
2040	9	90	CONNECTICUT	Atmospheric CO2	413.5012654	312.1501357
2040	9	111	CONNECTICUT	Primary PM2.5 - Organic Carbon	0.0081174	0.0072625
2040	9	6	CONNECTICUT	Nitrous Oxide (N2O)	0.0014293	0.0013316
2040	9	100	CONNECTICUT	PM10	0.0354595	0.0294927
2040	9	79	CONNECTICUT	Non-Methane Hydrocarbons	0.0324233	0.0251421
2040	9	105	CONNECTICUT	Primary PM10 - Sulfate Particulate	0.0000863	0.0000310
2040	9	3	CONNECTICUT	Oxides of Nitrogen (NOx)	0.2509235	0.1323277
2040	9	112	CONNECTICUT	Primary PM2.5 - Elemental Carbon	0.0011837	0.0011433
2040	9	30	CONNECTICUT	Ammonia (NH3)	0.0214284	0.0208630
2040	9	101	CONNECTICUT	Primary PM10 - Organic Carbon	0.0087340	0.0078809
2040	10	6	DELAWARE	Nitrous Oxide (N2O)	0.0014553	0.0013525
2040	10	100	DELAWARE	PM10	0.0347379	0.0286443
2040	10	79	DELAWARE	Non-Methane Hydrocarbons	0.0325442	0.0248615
2040	10	105	DELAWARE	Primary PM10 - Sulfate Particulate	0.0000803	0.0000307
2040	10	3	DELAWARE	Oxides of Nitrogen (NOx)	0.2405128	0.1294833
2040	10	112	DELAWARE	Primary PM2.5 - Elemental Carbon	0.0009676	0.0009155
2040	10	30	DELAWARE	Ammonia (NH3)	0.0210969	0.0205225
2040	10	101	DELAWARE	Primary PM10 - Organic Carbon	0.0071956	0.0063068
2040	10	1	DELAWARE	Total Gaseous Hydrocarbons	0.0399283	0.0290227
2040	10	87	DELAWARE	Volatile Organic Compounds	0.0333899	0.0255123
2040	10	110	DELAWARE	PM25	0.0145072	0.0122042
2040	10	5	DELAWARE	Methane (CH4)	0.0073840	0.0041611
2040	10	98	DELAWARE	CO2 Equivalent	402.3868106	311.0213621
2040	10	115	DELAWARE	Primary PM2.5 - Sulfate Particulate	0.0000767	0.0000285
2040	10	31	DELAWARE	Sulfur Dioxide (SO2)	0.0050212	0.0044862
2040	10	102	DELAWARE	Primary PM10 - Elemental Carbon	0.0010436	0.0009936
2040	10	2	DELAWARE	Carbon Monoxide (CO)	1.8745492	1.8083618
2040	10	90	DELAWARE	Atmospheric CO2	401.7816117	310.5156917
2040	10	111	DELAWARE	Primary PM2.5 - Organic Carbon	0.0066961	0.0058131
2040	11	1	DISTRICT OF COLUMBIA	Total Gaseous Hydrocarbons	0.0426292	0.0309022
2040	11	87	DISTRICT OF COLUMBIA	Volatile Organic Compounds	0.0361299	0.0272882
2040	11	110	DISTRICT OF COLUMBIA	PM25	0.0163185	0.0138319
2040	11	5	DISTRICT OF COLUMBIA	Methane (CH4)	0.0074185	0.0043101
2040	11	98	DISTRICT OF COLUMBIA	CO2 Equivalent	411.0273899	332.4504631
2040	11	115	DISTRICT OF COLUMBIA	Primary PM2.5 - Sulfate Particulate	0.0000711	0.0000301
2040	11	31	DISTRICT OF COLUMBIA	Sulfur Dioxide (SO2)	0.0052236	0.0047520
2040	11	102	DISTRICT OF COLUMBIA	Primary PM10 - Elemental Carbon	0.0010760	0.0010236
2040	11	2	DISTRICT OF COLUMBIA	Carbon Monoxide (CO)	1.8753282	1.8030433
2040	11	90	DISTRICT OF COLUMBIA	Atmospheric CO2	410.3325373	331.8545163
2040	11	111	DISTRICT OF COLUMBIA	Primary PM2.5 - Organic Carbon	0.0067703	0.0059357
2040	11	6	DISTRICT OF COLUMBIA	Nitrous Oxide (N2O)	0.0017423	0.0016337
2040	11	100	DISTRICT OF COLUMBIA	PM10	0.0414342	0.0344917
2040	11	79	DISTRICT OF COLUMBIA	Non-Methane Hydrocarbons	0.0352107	0.0265920
2040	11	105	DISTRICT OF COLUMBIA	Primary PM10 - Sulfate Particulate	0.0000746	0.0000325
2040	11	3	DISTRICT OF COLUMBIA	Oxides of Nitrogen (NOx)	0.2173729	0.1220880
2040	11	112	DISTRICT OF COLUMBIA	Primary PM2.5 - Elemental Carbon	0.0009968	0.0009431
2040	11	30	DISTRICT OF COLUMBIA	Ammonia (NH3)	0.0214805	0.0209906
2040	11	101	DISTRICT OF COLUMBIA	Primary PM10 - Organic Carbon	0.0072831	0.0064395

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2013	24	6	MARYLAND	Nitrous Oxide (N2O)	0.0036220	0.0036274
2013	24	100	MARYLAND	PM10	0.0642324	0.0347007
2013	24	79	MARYLAND	Non-Methane Hydrocarbons	0.1150820	0.0890482
2013	24	105	MARYLAND	Primary PM10 - Sulfate Particulate	0.0001027	0.0000420
2013	24	3	MARYLAND	Oxides of Nitrogen (NOx)	1.0489738	0.5209154
2013	24	112	MARYLAND	Primary PM2.5 - Elemental Carbon	0.0222477	0.0033446
2013	24	30	MARYLAND	Ammonia (NH3)	0.0319776	0.0323805
2013	24	101	MARYLAND	Primary PM10 - Organic Carbon	0.0155628	0.0100160
2013	24	1	MARYLAND	Total Gaseous Hydrocarbons	0.1227662	0.0946409
2013	24	87	MARYLAND	Volatile Organic Compounds	0.1182791	0.0914028
2013	24	110	MARYLAND	PM25	0.0435763	0.0180567
2013	24	5	MARYLAND	Methane (CH4)	0.0076842	0.0055927
2013	24	98	MARYLAND	CO2 Equivalent	506.4649277	411.9129950
2013	24	115	MARYLAND	Primary PM2.5 - Sulfate Particulate	0.0000982	0.0000391
2013	24	31	MARYLAND	Sulfur Dioxide (SO2)	0.0065278	0.0059783
2013	24	102	MARYLAND	Primary PM10 - Elemental Carbon	0.0229942	0.0035117
2013	24	2	MARYLAND	Carbon Monoxide (CO)	3.2826712	3.2147381
2013	24	90	MARYLAND	Atmospheric CO2	505.1823093	410.6724783
2013	24	111	MARYLAND	Primary PM2.5 - Organic Carbon	0.0146810	0.0092697
2013	25	1	MASSACHUSETTS	Total Gaseous Hydrocarbons	0.1184154	0.0904567
2013	25	87	MASSACHUSETTS	Volatile Organic Compounds	0.1140612	0.0873559
2013	25	110	MASSACHUSETTS	PM25	0.0447127	0.0211560
2013	25	5	MASSACHUSETTS	Methane (CH4)	0.0074478	0.0053641
2013	25	98	MASSACHUSETTS	CO2 Equivalent	507.4559634	422.8172030
2013	25	115	MASSACHUSETTS	Primary PM2.5 - Sulfate Particulate	0.0000927	0.0000400
2013	25	31	MASSACHUSETTS	Sulfur Dioxide (SO2)	0.0066208	0.0061254
2013	25	102	MASSACHUSETTS	Primary PM10 - Elemental Carbon	0.0213794	0.0038298
2013	25	2	MASSACHUSETTS	Carbon Monoxide (CO)	3.1964427	3.1069151
2013	25	90	MASSACHUSETTS	Atmospheric CO2	506.0699885	421.4769446
2013	25	111	MASSACHUSETTS	Primary PM2.5 - Organic Carbon	0.0165941	0.0113590
2013	25	6	MASSACHUSETTS	Nitrous Oxide (N2O)	0.0039713	0.0039644
2013	25	100	MASSACHUSETTS	PM10	0.0678016	0.0400387
2013	25	79	MASSACHUSETTS	Non-Methane Hydrocarbons	0.1109676	0.0850926
2013	25	105	MASSACHUSETTS	Primary PM10 - Sulfate Particulate	0.0000971	0.0000430
2013	25	3	MASSACHUSETTS	Oxides of Nitrogen (NOx)	0.9945868	0.5110330
2013	25	112	MASSACHUSETTS	Primary PM2.5 - Elemental Carbon	0.0206668	0.0036382
2013	25	30	MASSACHUSETTS	Ammonia (NH3)	0.0321906	0.0325182
2013	25	101	MASSACHUSETTS	Primary PM10 - Organic Carbon	0.0176412	0.0122783
2013	33	6	NEW HAMPSHIRE	Nitrous Oxide (N2O)	0.0032660	0.0032860
2013	33	100	NEW HAMPSHIRE	PM10	0.0665883	0.0346998
2013	33	79	NEW HAMPSHIRE	Non-Methane Hydrocarbons	0.1258649	0.0999858
2013	33	105	NEW HAMPSHIRE	Primary PM10 - Sulfate Particulate	0.0001121	0.0000414
2013	33	3	NEW HAMPSHIRE	Oxides of Nitrogen (NOx)	1.2282551	0.6005622
2013	33	112	NEW HAMPSHIRE	Primary PM2.5 - Elemental Carbon	0.0253485	0.0036061
2013	33	30	NEW HAMPSHIRE	Ammonia (NH3)	0.0315644	0.0320841
2013	33	101	NEW HAMPSHIRE	Primary PM10 - Organic Carbon	0.0175878	0.0121449
2013	33	1	NEW HAMPSHIRE	Total Gaseous Hydrocarbons	0.1341943	0.1062348
2013	33	87	NEW HAMPSHIRE	Volatile Organic Compounds	0.1293628	0.1026268
2013	33	110	NEW HAMPSHIRE	PM25	0.0478018	0.0196447
2013	33	5	NEW HAMPSHIRE	Methane (CH4)	0.0083292	0.0062489
2013	33	98	NEW HAMPSHIRE	CO2 Equivalent	510.6183989	400.9316911
2013	33	115	NEW HAMPSHIRE	Primary PM2.5 - Sulfate Particulate	0.0001074	0.0000385
2013	33	31	NEW HAMPSHIRE	Sulfur Dioxide (SO2)	0.0065204	0.0058931
2013	33	102	NEW HAMPSHIRE	Primary PM10 - Elemental Carbon	0.0262039	0.0037966
2013	33	2	NEW HAMPSHIRE	Carbon Monoxide (CO)	3.4749360	3.4408421
2013	33	90	NEW HAMPSHIRE	Atmospheric CO2	509.4327524	399.7834100
2013	33	111	NEW HAMPSHIRE	Primary PM2.5 - Organic Carbon	0.0165496	0.0112238

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2040	24	6	MARYLAND	Nitrous Oxide (N2O)	0.0014131	0.0013166
2040	24	100	MARYLAND	PM10	0.0337921	0.0277967
2040	24	79	MARYLAND	Non-Methane Hydrocarbons	0.0330307	0.0258707
2040	24	105	MARYLAND	Primary PM10 - Sulfate Particulate	0.0000882	0.0000309
2040	24	3	MARYLAND	Oxides of Nitrogen (NOx)	0.2506580	0.1317347
2040	24	112	MARYLAND	Primary PM2.5 - Elemental Carbon	0.0010076	0.0009520
2040	24	30	MARYLAND	Ammonia (NH3)	0.0213916	0.0208201
2040	24	101	MARYLAND	Primary PM10 - Organic Carbon	0.0075325	0.0065686
2040	24	1	MARYLAND	Total Gaseous Hydrocarbons	0.0406562	0.0302264
2040	24	87	MARYLAND	Volatile Organic Compounds	0.0338943	0.0265493
2040	24	110	MARYLAND	PM25	0.0145264	0.0121854
2040	24	5	MARYLAND	Methane (CH4)	0.0076255	0.0043557
2040	24	98	MARYLAND	CO2 Equivalent	416.7262409	311.7489813
2040	24	115	MARYLAND	Primary PM2.5 - Sulfate Particulate	0.0000844	0.0000287
2040	24	31	MARYLAND	Sulfur Dioxide (SO2)	0.0051389	0.0045310
2040	24	102	MARYLAND	Primary PM10 - Elemental Carbon	0.0010864	0.0010333
2040	24	2	MARYLAND	Carbon Monoxide (CO)	2.0072375	1.9717156
2040	24	90	MARYLAND	Atmospheric CO2	416.1290851	311.2504305
2040	24	111	MARYLAND	Primary PM2.5 - Organic Carbon	0.0070130	0.0060541
2040	25	1	MASSACHUSETTS	Total Gaseous Hydrocarbons	0.0408851	0.0299438
2040	25	87	MASSACHUSETTS	Volatile Organic Compounds	0.0342391	0.0263009
2040	25	110	MASSACHUSETTS	PM25	0.0167999	0.0145205
2040	25	5	MASSACHUSETTS	Methane (CH4)	0.0075207	0.0043165
2040	25	98	MASSACHUSETTS	CO2 Equivalent	414.8297025	320.1317897
2040	25	115	MASSACHUSETTS	Primary PM2.5 - Sulfate Particulate	0.0000794	0.0000294
2040	25	31	MASSACHUSETTS	Sulfur Dioxide (SO2)	0.0051983	0.0046448
2040	25	102	MASSACHUSETTS	Primary PM10 - Elemental Carbon	0.0013194	0.0012843
2040	25	2	MASSACHUSETTS	Carbon Monoxide (CO)	1.9847377	1.9327365
2040	25	90	MASSACHUSETTS	Atmospheric CO2	414.1954857	319.5955812
2040	25	111	MASSACHUSETTS	Primary PM2.5 - Organic Carbon	0.0083016	0.0074848
2040	25	6	MASSACHUSETTS	Nitrous Oxide (N2O)	0.0015398	0.0014406
2040	25	100	MASSACHUSETTS	PM10	0.0384065	0.0321938
2040	25	79	MASSACHUSETTS	Non-Methane Hydrocarbons	0.0333644	0.0256273
2040	25	105	MASSACHUSETTS	Primary PM10 - Sulfate Particulate	0.0000831	0.0000317
2040	25	3	MASSACHUSETTS	Oxides of Nitrogen (NOx)	0.2436086	0.1310905
2040	25	112	MASSACHUSETTS	Primary PM2.5 - Elemental Carbon	0.0012217	0.0011832
2040	25	30	MASSACHUSETTS	Ammonia (NH3)	0.0214617	0.0209242
2040	25	101	MASSACHUSETTS	Primary PM10 - Organic Carbon	0.0089374	0.0081221
2040	33	6	NEW HAMPSHIRE	Nitrous Oxide (N2O)	0.0012843	0.0011889
2040	33	100	NEW HAMPSHIRE	PM10	0.0329956	0.0275726
2040	33	79	NEW HAMPSHIRE	Non-Methane Hydrocarbons	0.0324710	0.0258277
2040	33	105	NEW HAMPSHIRE	Primary PM10 - Sulfate Particulate	0.0000968	0.0000305
2040	33	3	NEW HAMPSHIRE	Oxides of Nitrogen (NOx)	0.2801619	0.1425014
2040	33	112	NEW HAMPSHIRE	Primary PM2.5 - Elemental Carbon	0.0012386	0.0012068
2040	33	30	NEW HAMPSHIRE	Ammonia (NH3)	0.0212296	0.0206129
2040	33	101	NEW HAMPSHIRE	Primary PM10 - Organic Carbon	0.0092173	0.0083399
2040	33	1	NEW HAMPSHIRE	Total Gaseous Hydrocarbons	0.0402220	0.0301764
2040	33	87	NEW HAMPSHIRE	Volatile Organic Compounds	0.0333236	0.0265096
2040	33	110	NEW HAMPSHIRE	PM25	0.0156109	0.0134808
2040	33	5	NEW HAMPSHIRE	Methane (CH4)	0.0077511	0.0043487
2040	33	98	NEW HAMPSHIRE	CO2 Equivalent	424.1040251	303.1489704
2040	33	115	NEW HAMPSHIRE	Primary PM2.5 - Sulfate Particulate	0.0000928	0.0000283
2040	33	31	NEW HAMPSHIRE	Sulfur Dioxide (SO2)	0.0051515	0.0044620
2040	33	102	NEW HAMPSHIRE	Primary PM10 - Elemental Carbon	0.0013364	0.0013099
2040	33	2	NEW HAMPSHIRE	Carbon Monoxide (CO)	2.0566245	2.0369273
2040	33	90	NEW HAMPSHIRE	Atmospheric CO2	423.5441636	302.6901281
2040	33	111	NEW HAMPSHIRE	Primary PM2.5 - Organic Carbon	0.0085724	0.0076849

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2013	34	1	NEW JERSEY	Total Gaseous Hydrocarbons	0.1236686	0.0962025
2013	34	87	NEW JERSEY	Volatile Organic Compounds	0.1192152	0.0929995
2013	34	110	NEW JERSEY	PM25	0.0430242	0.0196235
2013	34	5	NEW JERSEY	Methane (CH4)	0.0076578	0.0055934
2013	34	98	NEW JERSEY	CO2 Equivalent	505.1927897	421.7946441
2013	34	115	NEW JERSEY	Primary PM2.5 - Sulfate Particulate	0.0000918	0.0000399
2013	34	31	NEW JERSEY	Sulfur Dioxide (SO2)	0.0065997	0.0061116
2013	34	102	NEW JERSEY	Primary PM10 - Elemental Carbon	0.0209390	0.0036249
2013	34	2	NEW JERSEY	Carbon Monoxide (CO)	3.1741007	3.0818032
2013	34	90	NEW JERSEY	Atmospheric CO2	503.8046551	420.4526635
2013	34	111	NEW JERSEY	Primary PM2.5 - Organic Carbon	0.0153326	0.0100207
2013	34	6	NEW JERSEY	Nitrous Oxide (N2O)	0.0039642	0.0039547
2013	34	100	NEW JERSEY	PM10	0.0659601	0.0383609
2013	34	79	NEW JERSEY	Non-Methane Hydrocarbons	0.1160107	0.0906092
2013	34	105	NEW JERSEY	Primary PM10 - Sulfate Particulate	0.0000962	0.0000429
2013	34	3	NEW JERSEY	Oxides of Nitrogen (NOx)	0.9758493	0.5046399
2013	34	112	NEW JERSEY	Primary PM2.5 - Elemental Carbon	0.0202489	0.0034494
2013	34	30	NEW JERSEY	Ammonia (NH3)	0.0321140	0.0324349
2013	34	101	NEW JERSEY	Primary PM10 - Organic Carbon	0.0162718	0.0108252
2013	36	6	NEW YORK	Nitrous Oxide (N2O)	0.0037767	0.0037752
2013	36	100	NEW YORK	PM10	0.0662787	0.0378791
2013	36	79	NEW YORK	Non-Methane Hydrocarbons	0.1094456	0.0831623
2013	36	105	NEW YORK	Primary PM10 - Sulfate Particulate	0.0001002	0.0000433
2013	36	3	NEW YORK	Oxides of Nitrogen (NOx)	1.0129422	0.5057613
2013	36	112	NEW YORK	Primary PM2.5 - Elemental Carbon	0.0213690	0.0035479
2013	36	30	NEW YORK	Ammonia (NH3)	0.0319422	0.0323069
2013	36	101	NEW YORK	Primary PM10 - Organic Carbon	0.0170426	0.0116247
2013	36	1	NEW YORK	Total Gaseous Hydrocarbons	0.1167319	0.0883351
2013	36	87	NEW YORK	Volatile Organic Compounds	0.1117992	0.0846828
2013	36	110	NEW YORK	PM25	0.0444378	0.0200945
2013	36	5	NEW YORK	Methane (CH4)	0.0072862	0.0051727
2013	36	98	NEW YORK	CO2 Equivalent	504.5325090	415.7086986
2013	36	115	NEW YORK	Primary PM2.5 - Sulfate Particulate	0.0000957	0.0000402
2013	36	31	NEW YORK	Sulfur Dioxide (SO2)	0.0066877	0.0061785
2013	36	102	NEW YORK	Primary PM10 - Elemental Carbon	0.0220990	0.0037323
2013	36	2	NEW YORK	Carbon Monoxide (CO)	3.2765424	3.1870002
2013	36	90	NEW YORK	Atmospheric CO2	503.2101994	414.4310797
2013	36	111	NEW YORK	Primary PM2.5 - Organic Carbon	0.0160430	0.0107537
2013	42	1	PENNSYLVANIA	Total Gaseous Hydrocarbons	0.1357688	0.1082687
2013	42	87	PENNSYLVANIA	Volatile Organic Compounds	0.1297321	0.1034398
2013	42	110	PENNSYLVANIA	PM25	0.0453476	0.0188817
2013	42	5	PENNSYLVANIA	Methane (CH4)	0.0083488	0.0062887
2013	42	98	PENNSYLVANIA	CO2 Equivalent	509.2184012	409.4167942
2013	42	115	PENNSYLVANIA	Primary PM2.5 - Sulfate Particulate	0.0001026	0.0000401
2013	42	31	PENNSYLVANIA	Sulfur Dioxide (SO2)	0.0067275	0.0061643
2013	42	102	PENNSYLVANIA	Primary PM10 - Elemental Carbon	0.0241680	0.0036239
2013	42	2	PENNSYLVANIA	Carbon Monoxide (CO)	3.6620550	3.6133010
2013	42	90	PENNSYLVANIA	Atmospheric CO2	507.9455353	408.1825995
2013	42	111	PENNSYLVANIA	Primary PM2.5 - Organic Carbon	0.0154317	0.0100522
2013	42	6	PENNSYLVANIA	Nitrous Oxide (N2O)	0.0035461	0.0035605
2013	42	100	PENNSYLVANIA	PM10	0.0657763	0.0354297
2013	42	79	PENNSYLVANIA	Non-Methane Hydrocarbons	0.1274199	0.1019799
2013	42	105	PENNSYLVANIA	Primary PM10 - Sulfate Particulate	0.0001073	0.0000431
2013	42	3	PENNSYLVANIA	Oxides of Nitrogen (NOx)	1.1275817	0.5641037
2013	42	112	PENNSYLVANIA	Primary PM2.5 - Elemental Carbon	0.0233813	0.0034476
2013	42	30	PENNSYLVANIA	Ammonia (NH3)	0.0317508	0.0322007
2013	42	101	PENNSYLVANIA	Primary PM10 - Organic Carbon	0.0163755	0.0108672

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2040	34	1	NEW JERSEY	Total Gaseous Hydrocarbons	0.0401443	0.0291182
2040	34	87	NEW JERSEY	Volatile Organic Compounds	0.0336621	0.0256506
2040	34	110	NEW JERSEY	PM25	0.0157844	0.0134463
2040	34	5	NEW JERSEY	Methane (CH4)	0.0073382	0.0041220
2040	34	98	NEW JERSEY	CO2 Equivalent	412.9012652	319.3312017
2040	34	115	NEW JERSEY	Primary PM2.5 - Sulfate Particulate	0.0000787	0.0000293
2040	34	31	NEW JERSEY	Sulfur Dioxide (SO2)	0.0051813	0.0046340
2040	34	102	NEW JERSEY	Primary PM10 - Elemental Carbon	0.0011705	0.0011250
2040	34	2	NEW JERSEY	Carbon Monoxide (CO)	1.9185058	1.8590646
2040	34	90	NEW JERSEY	Atmospheric CO2	412.2718466	318.8002561
2040	34	111	NEW JERSEY	Primary PM2.5 - Organic Carbon	0.0074296	0.0065618
2040	34	6	NEW JERSEY	Nitrous Oxide (N2O)	0.0015365	0.0014367
2040	34	100	NEW JERSEY	PM10	0.0372893	0.0310160
2040	34	79	NEW JERSEY	Non-Methane Hydrocarbons	0.0328061	0.0249962
2040	34	105	NEW JERSEY	Primary PM10 - Sulfate Particulate	0.0000824	0.0000316
2040	34	3	NEW JERSEY	Oxides of Nitrogen (NOx)	0.2370676	0.1261708
2040	34	112	NEW JERSEY	Primary PM2.5 - Elemental Carbon	0.0010846	0.0010365
2040	34	30	NEW JERSEY	Ammonia (NH3)	0.0214101	0.0208697
2040	34	101	NEW JERSEY	Primary PM10 - Organic Carbon	0.0079911	0.0071198
2040	36	6	NEW YORK	Nitrous Oxide (N2O)	0.0014683	0.0013702
2040	36	100	NEW YORK	PM10	0.0364669	0.0304604
2040	36	79	NEW YORK	Non-Methane Hydrocarbons	0.0323750	0.0248080
2040	36	105	NEW YORK	Primary PM10 - Sulfate Particulate	0.0000860	0.0000319
2040	36	3	NEW YORK	Oxides of Nitrogen (NOx)	0.2470824	0.1296587
2040	36	112	NEW YORK	Primary PM2.5 - Elemental Carbon	0.0011695	0.0011291
2040	36	30	NEW YORK	Ammonia (NH3)	0.0213394	0.0207789
2040	36	101	NEW YORK	Primary PM10 - Organic Carbon	0.0086132	0.0077668
2040	36	1	NEW YORK	Total Gaseous Hydrocarbons	0.0397687	0.0289404
2040	36	87	NEW YORK	Volatile Organic Compounds	0.0329540	0.0252381
2040	36	110	NEW YORK	PM25	0.0160475	0.0137965
2040	36	5	NEW YORK	Methane (CH4)	0.0073937	0.0041324
2040	36	98	NEW YORK	CO2 Equivalent	413.9509094	314.6421158
2040	36	115	NEW YORK	Primary PM2.5 - Sulfate Particulate	0.0000821	0.0000296
2040	36	31	NEW YORK	Sulfur Dioxide (SO2)	0.0052558	0.0046835
2040	36	102	NEW YORK	Primary PM10 - Elemental Carbon	0.0012625	0.0012256
2040	36	2	NEW YORK	Carbon Monoxide (CO)	2.0533544	1.9970549
2040	36	90	NEW YORK	Atmospheric CO2	413.3414708	314.1315590
2040	36	111	NEW YORK	Primary PM2.5 - Organic Carbon	0.0080054	0.0071575
2040	42	1	PENNSYLVANIA	Total Gaseous Hydrocarbons	0.0404742	0.0300173
2040	42	87	PENNSYLVANIA	Volatile Organic Compounds	0.0333205	0.0260756
2040	42	110	PENNSYLVANIA	PM25	0.0152004	0.0129463
2040	42	5	PENNSYLVANIA	Methane (CH4)	0.0076274	0.0042910
2040	42	98	PENNSYLVANIA	CO2 Equivalent	420.4470146	309.7224060
2040	42	115	PENNSYLVANIA	Primary PM2.5 - Sulfate Particulate	0.0000884	0.0000295
2040	42	31	PENNSYLVANIA	Sulfur Dioxide (SO2)	0.0052990	0.0046704
2040	42	102	PENNSYLVANIA	Primary PM10 - Elemental Carbon	0.0011969	0.0011547
2040	42	2	PENNSYLVANIA	Carbon Monoxide (CO)	2.2101115	2.1734362
2040	42	90	PENNSYLVANIA	Atmospheric CO2	419.8582985	309.2332301
2040	42	111	PENNSYLVANIA	Primary PM2.5 - Organic Carbon	0.0076861	0.0067587
2040	42	6	PENNSYLVANIA	Nitrous Oxide (N2O)	0.0013857	0.0012906
2040	42	100	PENNSYLVANIA	PM10	0.0342345	0.0284685
2040	42	79	PENNSYLVANIA	Non-Methane Hydrocarbons	0.0328468	0.0257263
2040	42	105	PENNSYLVANIA	Primary PM10 - Sulfate Particulate	0.0000924	0.0000318
2040	42	3	PENNSYLVANIA	Oxides of Nitrogen (NOx)	0.2616010	0.1351430
2040	42	112	PENNSYLVANIA	Primary PM2.5 - Elemental Carbon	0.0011096	0.0010639
2040	42	30	PENNSYLVANIA	Ammonia (NH3)	0.0212864	0.0207010
2040	42	101	PENNSYLVANIA	Primary PM10 - Organic Carbon	0.0082603	0.0073338

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2013	44	6	RHODE ISLAND	Nitrous Oxide (N2O)	0.0040326	0.0040245
2013	44	100	RHODE ISLAND	PM10	0.0678640	0.0402336
2013	44	79	RHODE ISLAND	Non-Methane Hydrocarbons	0.1119141	0.0861564
2013	44	105	RHODE ISLAND	Primary PM10 - Sulfate Particulate	0.0000966	0.0000432
2013	44	3	RHODE ISLAND	Oxides of Nitrogen (NOx)	0.9891195	0.5135331
2013	44	112	RHODE ISLAND	Primary PM2.5 - Elemental Carbon	0.0204410	0.0036083
2013	44	30	RHODE ISLAND	Ammonia (NH3)	0.0322510	0.0325697
2013	44	101	RHODE ISLAND	Primary PM10 - Organic Carbon	0.0174102	0.0120395
2013	44	1	RHODE ISLAND	Total Gaseous Hydrocarbons	0.1193768	0.0915401
2013	44	87	RHODE ISLAND	Volatile Organic Compounds	0.1149822	0.0884094
2013	44	110	RHODE ISLAND	PM25	0.0444113	0.0210285
2013	44	5	RHODE ISLAND	Methane (CH4)	0.0074627	0.0053837
2013	44	98	RHODE ISLAND	CO2 Equivalent	508.1694981	424.6371360
2013	44	115	RHODE ISLAND	Primary PM2.5 - Sulfate Particulate	0.0000922	0.0000402
2013	44	31	RHODE ISLAND	Sulfur Dioxide (SO2)	0.0066471	0.0061570
2013	44	102	RHODE ISLAND	Primary PM10 - Elemental Carbon	0.0211450	0.0037971
2013	44	2	RHODE ISLAND	Carbon Monoxide (CO)	3.2190589	3.1296159
2013	44	90	RHODE ISLAND	Atmospheric CO2	506.7642023	423.2778657
2013	44	111	RHODE ISLAND	Primary PM2.5 - Organic Carbon	0.0163814	0.0111401
2013	51	1	VIRGINIA	Total Gaseous Hydrocarbons	0.1446072	0.1178743
2013	51	87	VIRGINIA	Volatile Organic Compounds	0.1373318	0.1117443
2013	51	110	VIRGINIA	PM25	0.0442684	0.0175726
2013	51	5	VIRGINIA	Methane (CH4)	0.0088403	0.0068253
2013	51	98	VIRGINIA	CO2 Equivalent	511.7448743	411.3474435
2013	51	115	VIRGINIA	Primary PM2.5 - Sulfate Particulate	0.0001021	0.0000392
2013	51	31	VIRGINIA	Sulfur Dioxide (SO2)	0.0065831	0.0060048
2013	51	102	VIRGINIA	Primary PM10 - Elemental Carbon	0.0241295	0.0034527
2013	51	2	VIRGINIA	Carbon Monoxide (CO)	3.8496987	3.8281486
2013	51	90	VIRGINIA	Atmospheric CO2	510.4541322	410.0938406
2013	51	111	VIRGINIA	Primary PM2.5 - Organic Carbon	0.0143471	0.0088812
2013	51	6	VIRGINIA	Nitrous Oxide (N2O)	0.0035709	0.0035873
2013	51	100	VIRGINIA	PM10	0.0646929	0.0340615
2013	51	79	VIRGINIA	Non-Methane Hydrocarbons	0.1357669	0.1110490
2013	51	105	VIRGINIA	Primary PM10 - Sulfate Particulate	0.0001067	0.0000422
2013	51	3	VIRGINIA	Oxides of Nitrogen (NOx)	1.1158768	0.5610248
2013	51	112	VIRGINIA	Primary PM2.5 - Elemental Carbon	0.0233519	0.0032902
2013	51	30	VIRGINIA	Ammonia (NH3)	0.0318975	0.0323490
2013	51	101	VIRGINIA	Primary PM10 - Organic Carbon	0.0151974	0.0095950
2013	54	6	WEST VIRGINIA	Nitrous Oxide (N2O)	0.0030016	0.0030290
2013	54	100	WEST VIRGINIA	PM10	0.0646745	0.0301594
2013	54	79	WEST VIRGINIA	Non-Methane Hydrocarbons	0.1330345	0.1072396
2013	54	105	WEST VIRGINIA	Primary PM10 - Sulfate Particulate	0.0001211	0.0000417
2013	54	3	WEST VIRGINIA	Oxides of Nitrogen (NOx)	1.3092647	0.6285064
2013	54	112	WEST VIRGINIA	Primary PM2.5 - Elemental Carbon	0.0276114	0.0033248
2013	54	30	WEST VIRGINIA	Ammonia (NH3)	0.0314475	0.0320632
2013	54	101	WEST VIRGINIA	Primary PM10 - Organic Carbon	0.0156163	0.0099306
2013	54	1	WEST VIRGINIA	Total Gaseous Hydrocarbons	0.1418191	0.1139593
2013	54	87	WEST VIRGINIA	Volatile Organic Compounds	0.1367771	0.1101054
2013	54	110	WEST VIRGINIA	PM25	0.0476705	0.0167957
2013	54	5	WEST VIRGINIA	Methane (CH4)	0.0087845	0.0067197
2013	54	98	WEST VIRGINIA	CO2 Equivalent	517.4421241	394.2218855
2013	54	115	WEST VIRGINIA	Primary PM2.5 - Sulfate Particulate	0.0001161	0.0000388
2013	54	31	WEST VIRGINIA	Sulfur Dioxide (SO2)	0.0066531	0.0059622
2013	54	102	WEST VIRGINIA	Primary PM10 - Elemental Carbon	0.0285223	0.0034916
2013	54	2	WEST VIRGINIA	Carbon Monoxide (CO)	4.0973961	4.1337251
2013	54	90	WEST VIRGINIA	Atmospheric CO2	516.3290187	393.1435395
2013	54	111	WEST VIRGINIA	Primary PM2.5 - Organic Carbon	0.0147375	0.0091802

Year	State ID	Pollutant ID	State	Pollutant Name	Emission Factor (grams/vehicle-mile)	
					Fleet	Car
2040	44	100	RHODE ISLAND	PM10	0.0387025	0.0324108
2040	44	6	RHODE ISLAND	Nitrous Oxide (N2O)	0.0015623	0.0014628
2040	44	79	RHODE ISLAND	Non-Methane Hydrocarbons	0.0337274	0.0259329
2040	44	105	RHODE ISLAND	Primary PM10 - Sulfate Particulate	0.0000826	0.0000318
2040	44	112	RHODE ISLAND	Primary PM2.5 - Elemental Carbon	0.0011970	0.0011561
2040	44	3	RHODE ISLAND	Oxides of Nitrogen (NOx)	0.2411754	0.1302990
2040	44	101	RHODE ISLAND	Primary PM10 - Organic Carbon	0.0087574	0.0079316
2040	44	30	RHODE ISLAND	Ammonia (NH3)	0.0214912	0.0209602
2040	44	87	RHODE ISLAND	Volatile Organic Compounds	0.0345971	0.0266031
2040	44	110	RHODE ISLAND	PM25	0.0167395	0.0144316
2040	44	1	RHODE ISLAND	Total Gaseous Hydrocarbons	0.0412341	0.0302457
2040	44	98	RHODE ISLAND	CO2 Equivalent	415.0180384	321.5305845
2040	44	115	RHODE ISLAND	Primary PM2.5 - Sulfate Particulate	0.0000789	0.0000295
2040	44	5	RHODE ISLAND	Methane (CH4)	0.0075068	0.0043128
2040	44	102	RHODE ISLAND	Primary PM10 - Elemental Carbon	0.0012926	0.0012549
2040	44	31	RHODE ISLAND	Sulfur Dioxide (SO2)	0.0052168	0.0046691
2040	44	90	RHODE ISLAND	Atmospheric CO2	414.3771413	320.9875844
2040	44	111	RHODE ISLAND	Primary PM2.5 - Organic Carbon	0.0081352	0.0073095
2040	44	2	RHODE ISLAND	Carbon Monoxide (CO)	1.9916332	1.9388277
2040	51	1	VIRGINIA	Total Gaseous Hydrocarbons	0.0429316	0.0327723
2040	51	87	VIRGINIA	Volatile Organic Compounds	0.0351881	0.0282349
2040	51	110	VIRGINIA	PM25	0.0142611	0.0118995
2040	51	5	VIRGINIA	Methane (CH4)	0.0079748	0.0046828
2040	51	98	VIRGINIA	CO2 Equivalent	422.3136683	311.2398605
2040	51	115	VIRGINIA	Primary PM2.5 - Sulfate Particulate	0.0000879	0.0000288
2040	51	31	VIRGINIA	Sulfur Dioxide (SO2)	0.0051879	0.0045500
2040	51	102	VIRGINIA	Primary PM10 - Elemental Carbon	0.0010539	0.0009967
2040	51	2	VIRGINIA	Carbon Monoxide (CO)	2.2853812	2.2709394
2040	51	90	VIRGINIA	Atmospheric CO2	421.7146722	310.7392445
2040	51	111	VIRGINIA	Primary PM2.5 - Organic Carbon	0.0068492	0.0058399
2040	51	6	VIRGINIA	Nitrous Oxide (N2O)	0.0013956	0.0013013
2040	51	100	VIRGINIA	PM10	0.0332942	0.0273805
2040	51	79	VIRGINIA	Non-Methane Hydrocarbons	0.0349568	0.0280895
2040	51	105	VIRGINIA	Primary PM10 - Sulfate Particulate	0.0000919	0.0000310
2040	51	3	VIRGINIA	Oxides of Nitrogen (NOx)	0.2611593	0.1384960
2040	51	112	VIRGINIA	Primary PM2.5 - Elemental Carbon	0.0009780	0.0009183
2040	51	30	VIRGINIA	Ammonia (NH3)	0.0213759	0.0207985
2040	51	101	VIRGINIA	Primary PM10 - Organic Carbon	0.0073513	0.0063360
2040	54	6	WEST VIRGINIA	Nitrous Oxide (N2O)	0.0011898	0.0010938
2040	54	100	WEST VIRGINIA	PM10	0.0292661	0.0238718
2040	54	79	WEST VIRGINIA	Non-Methane Hydrocarbons	0.0341912	0.0282880
2040	54	105	WEST VIRGINIA	Primary PM10 - Sulfate Particulate	0.0001047	0.0000307
2040	54	3	WEST VIRGINIA	Oxides of Nitrogen (NOx)	0.2935308	0.1499319
2040	54	112	WEST VIRGINIA	Primary PM2.5 - Elemental Carbon	0.0010359	0.0009799
2040	54	30	WEST VIRGINIA	Ammonia (NH3)	0.0212322	0.0205883
2040	54	101	WEST VIRGINIA	Primary PM10 - Organic Carbon	0.0078824	0.0067971
2040	54	1	WEST VIRGINIA	Total Gaseous Hydrocarbons	0.0424219	0.0330706
2040	54	87	WEST VIRGINIA	Volatile Organic Compounds	0.0351015	0.0290448
2040	54	110	WEST VIRGINIA	PM25	0.0136255	0.0113377
2040	54	5	WEST VIRGINIA	Methane (CH4)	0.0082307	0.0047826
2040	54	98	WEST VIRGINIA	CO2 Equivalent	432.6930229	297.9117124
2040	54	115	WEST VIRGINIA	Primary PM2.5 - Sulfate Particulate	0.0001004	0.0000285
2040	54	31	WEST VIRGINIA	Sulfur Dioxide (SO2)	0.0052678	0.0045117
2040	54	102	WEST VIRGINIA	Primary PM10 - Elemental Carbon	0.0011156	0.0010636
2040	54	2	WEST VIRGINIA	Carbon Monoxide (CO)	2.4881483	2.5139117
2040	54	90	WEST VIRGINIA	Atmospheric CO2	432.1524771	297.4733701
2040	54	111	WEST VIRGINIA	Primary PM2.5 - Organic Carbon	0.0073499	0.0062642

2040 Roadway Emissions

State	Pollutant	Alternative 1	Alternative 2	Alternative 3				Alternative 1	Alternative 2	Alternative 3			
				via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)			via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)
		annual reduction (grams)						annual reduction (short tons)					
CT	Carbon Monoxide (CO)	-285643080	-386591769	-426715458	-402761014	-440963145	-416358230	-314.8675	-426.1444	-470.3731	-443.9679	-486.0785	-458.9563
CT	Oxides of Nitrogen (NOx)	-19596589	-26522190	-29274882	-27631483	-30252347	-28564323	-21.6015	-29.2357	-32.2700	-30.4585	-33.3475	-31.4868
CT	Sulfur Dioxide (SO2)	-672058	-909569	-1003972	-947612	-1037494	-979603	-0.7408	-1.0026	-1.1067	-1.0446	-1.1436	-1.0798
CT	Atmospheric CO2	-46226722176	-62563638167	-69057009743	-65180369603	-71362767807	-67380859479	-50956.2241	-68964.5862	-76122.3011	-71849.0381	-78663.9636	-74274.6623
CT	Methane (CH4)	-627932	-849849	-938053	-885394	-969374	-915285	-0.6922	-0.9368	-1.0340	-0.9760	-1.0686	-1.0089
CT	Nitrous Oxide (N2O)	-197202	-266895	-294596	-278058	-304432	-287446	-0.2174	-0.2942	-0.3247	-0.3065	-0.3356	-0.3169
CT	CO2 Equivalent	-46300893474	-62664022232	-69167812495	-65284952243	-71477270174	-67488972830	-51037.9840	-69075.2407	-76244.4402	-71964.3207	-78790.1808	-74393.8368
CT	PM10	-4367606	-5911155	-6524663	-6158390	-6742517	-6366297	-4.8145	-6.5159	-7.1922	-6.7885	-7.4324	-7.0176
CT	PM25	-2018616	-2732012	-3015563	-2846279	-3116250	-2942369	-2.2251	-3.0115	-3.3241	-3.1375	-3.4351	-3.2434
CT	Volatile Organic Compounds	-3820436	-5170611	-5707259	-5386872	-5897820	-5568733	-4.2113	-5.6996	-6.2912	-5.9380	-6.5012	-6.1385
DC	Carbon Monoxide (CO)	-48809833	-66059643	-72915859	-68822595	-75350460	-71146046	-53.8036	-72.8183	-80.3760	-75.8639	-83.0596	-78.4251
DC	Oxides of Nitrogen (NOx)	-3305021	-4473043	-4937293	-4660129	-5102145	-4817455	-3.6432	-4.9307	-5.4424	-5.1369	-5.6242	-5.3103
DC	Sulfur Dioxide (SO2)	-128640	-174102	-192172	-181384	-198589	-187508	-0.1418	-0.1919	-0.2118	-0.1999	-0.2189	-0.2067
DC	Atmospheric CO2	-8983568865	-12158438355	-13420341600	-12666966452	-13868436022	-13094603356	-9902.6867	-13402.3803	-14793.3901	-13962.9364	-15287.3295	-14434.3253
DC	Methane (CH4)	-116679	-157914	-174304	-164519	-180124	-170073	-0.1286	-0.1741	-0.1921	-0.1814	-0.1986	-0.1875
DC	Nitrous Oxide (N2O)	-44226	-59856	-66069	-62360	-68275	-64465	-0.0488	-0.0660	-0.0728	-0.0687	-0.0753	-0.0711
DC	CO2 Equivalent	-8999701625	-12180272569	-13444441949	-12689713884	-13893341062	-13118118741	-9920.4701	-13426.4484	-14819.9562	-13988.0111	-15314.7826	-14460.2465
DC	PM10	-933717	-1263701	-1394858	-1316556	-1441432	-1361003	-1.0292	-1.3930	-1.5376	-1.4513	-1.5889	-1.5002
DC	PM25	-374441	-506771	-559368	-527967	-578045	-545791	-0.4128	-0.5586	-0.6166	-0.5820	-0.6372	-0.6016
DC	Volatile Organic Compounds	-738714	-999781	-1103547	-1041597	-1140393	-1076762	-0.8143	-1.1021	-1.2165	-1.1482	-1.2571	-1.1869
MD	Carbon Monoxide (CO)	-236029876	-319444838	-352599464	-332805655	-364372477	-344041177	-260.1783	-352.1276	-388.6743	-366.8553	-401.6518	-379.2404
MD	Oxides of Nitrogen (NOx)	-15769675	-21342813	-23557946	-22235478	-24344527	-22986148	-17.3831	-23.5264	-25.9682	-24.5104	-26.8352	-25.3379
MD	Sulfur Dioxide (SO2)	-542398	-734086	-810276	-764790	-837331	-790609	-0.5979	-0.8092	-0.8932	-0.8430	-0.9230	-0.8715
MD	Atmospheric CO2	-37259125433	-50426816618	-55660528519	-52535924082	-57518988840	-54309537361	-41071.1436	-55586.0344	-61355.2126	-57910.9267	-63403.8138	-59866.0002
MD	Methane (CH4)	-521406	-705675	-778916	-735190	-804923	-760010	-0.5748	-0.7779	-0.8586	-0.8104	-0.8873	-0.8378
MD	Nitrous Oxide (N2O)	-157602	-213300	-235438	-222221	-243299	-229723	-0.1737	-0.2351	-0.2595	-0.2450	-0.2682	-0.2532
MD	CO2 Equivalent	-37318805878	-50507588639	-55749683729	-52620074403	-57611120870	-54396528597	-41136.9300	-55675.0703	-61453.4893	-58003.6866	-63505.3720	-59961.8916
MD	PM10	-3327479	-4503438	-4970842	-4691795	-5136815	-4850190	-3.6679	-4.9642	-5.4794	-5.1718	-5.6624	-5.3464
MD	PM25	-1458687	-1974200	-2179099	-2056771	-2251857	-2126208	-1.6079	-2.1762	-2.4020	-2.2672	-2.4822	-2.3437
MD	Volatile Organic Compounds	-3178158	-4301347	-4747776	-4481251	-4906300	-4632538	-3.5033	-4.7414	-5.2335	-4.9397	-5.4083	-5.1065
DE	Carbon Monoxide (CO)	-14675541	-19862001	-21923444	-20692732	-22655450	-21391318	-16.1770	-21.8941	-24.1665	-22.8098	-24.9734	-23.5799
DE	Oxides of Nitrogen (NOx)	-1050806	-1422169	-1569774	-1481652	-1622187	-1531672	-1.1583	-1.5677	-1.7304	-1.6332	-1.7882	-1.6884
DE	Sulfur Dioxide (SO2)	-36407	-49274	-54388	-51335	-56204	-53068	-0.0401	-0.0543	-0.0600	-0.0566	-0.0620	-0.0585
DE	Atmospheric CO2	-2519952368	-3410524924	-3764497395	-3553170525	-3890190938	-3673125595	-2777.7712	-3759.4591	-4149.6469	-3916.6989	-4288.2002	-4048.9267
DE	Methane (CH4)	-33769	-45704	-50447	-47615	-52131	-49223	-0.0372	-0.0504	-0.0556	-0.0525	-0.0575	-0.0543
DE	Nitrous Oxide (N2O)	-10976	-14855	-16397	-15477	-16945	-15999	-0.0121	-0.0164	-0.0181	-0.0171	-0.0187	-0.0176
DE	CO2 Equivalent	-2524056075	-3416078916	-3770627826	-3558956813	-3896526059	-3679107228	-2782.2948	-3765.5813	-4156.4045	-3923.0772	-4295.1835	-4055.5203
DE	PM10	-232460	-314613	-347266	-327771	-358861	-338837	-0.2562	-0.3468	-0.3828	-0.3613	-0.3956	-0.3735
DE	PM25	-99042	-134044	-147956	-139651	-152897	-144365	-0.1092	-0.1478	-0.1631	-0.1539	-0.1685	-0.1591
DE	Volatile Organic Compounds	-207042	-280212	-309295	-291932	-319622	-301788	-0.2282	-0.3089	-0.3409	-0.3218	-0.3523	-0.3327
PA	Carbon Monoxide (CO)	-273500836	-370158353	-408576447	-385640269	-422218487	-398659488	-301.4830	-408.0296	-450.3783	-425.0955	-465.4161	-439.4467
PA	Oxides of Nitrogen (NOx)	-17006125	-23016234	-25405049	-23978891	-26253303	-24788418	-18.7460	-25.3710	-28.0043	-26.4322	-28.9393	-27.3245
PA	Sulfur Dioxide (SO2)	-587719	-795424	-877980	-828693	-907295	-856670	-0.6478	-0.8768	-0.9678	-0.9135	-1.0001	-0.9443
PA	Atmospheric CO2	-38913287986	-52665574257	-58131642934	-54868318020	-60072611780	-56720672940	-42894.5452	-58053.8416	-64079.1492	-60481.9502	-66218.7005	-62523.8214
PA	Methane (CH4)	-539967	-730795	-806643	-761361	-833577	-787065	-0.5952	-0.8056	-0.8892	-0.8393	-0.9189	-0.8676
PA	Nitrous Oxide (N2O)	-162406	-219802	-242614	-228995	-250715	-236726	-0.1790	-0.2423	-0.2674	-0.2524	-0.2764	-0.2609
PA	CO2 Equivalent	-38974844905	-52748885915	-58223601364	-54955114197	-60167640627	-56810399357	-42962.4001	-58145.6769	-64180.5160	-60577.6266	-66323.4518	-62622.7278
PA	PM10	-3582413	-4848468	-5351682	-5051256	-5530371	-5221786	-3.9489	-5.3445	-5.8992	-5.5681	-6.0962	-5.7560
PA	PM25	-1629132	-2204881	-2433722	-2297101	-2514982	-2374651	-1.7958	-2.4305	-2.6827	-2.5321	-2.7723	-2.6176
PA	Volatile Organic Compounds	-3281303	-4440943	-4901861	-4626686	-5065530	-4782883	-3.6170	-4.8953	-5.4034	-5.1000	-5.5838	-5.2722
NJ	Carbon Monoxide (CO)	-604687394	-818389052	-903328233	-852618269	-933489637	-881402670	-666.5536	-902.1193	-995.7486	-939.8505	-1028.9959	-971.5799
NJ	Oxides of Nitrogen (NOx)	-41038872	-55542357	-61307002	-57865423	-63353994	-59818960	-45.2376	-61.2250	-67.5794	-63.7857	-69.8358	-65.9391
NJ	Sulfur Dioxide (SO2)	-1507286	-2039973	-2251698	-2125295	-2326881	-2197045	-1.6615	-2.2487	-2.4821	-2.3427	-2.5649	-2.4218
NJ	Atmospheric CO2	-103694352552	-140340816906	-154906547066	-146210587880	-160078752196	-151146658668	-114303.4249	-154699.2255	-170755.1900	-161169.5386	-176456.5686	-166610.6237

2040 Roadway Emissions

State	Pollutant	Alternative 1	Alternative 2	Alternative 3				Alternative 1	Alternative 2	Alternative 3			
				via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)			via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)
		annual reduction (grams)						annual reduction (short tons)					
NJ	Methane (CH4)	-1340726	-1814550	-2002879	-1890443	-2069753	-1954265	-1.4779	-2.0002	-2.2078	-2.0839	-2.2815	-2.1542
NJ	Nitrous Oxide (N2O)	-467293	-632439	-698078	-658891	-721387	-681135	-0.5151	-0.6971	-0.7695	-0.7263	-0.7952	-0.7508
NJ	CO2 Equivalent	-103867050225	-140574547402	-155164536046	-146454094182	-160345355220	-151398385745	-114493.7915	-154956.8692	-171039.5741	-161437.9583	-176750.4481	-166888.1052
NJ	PM10	-10088392	-13653715	-15070810	-14224783	-15574013	-14705012	-11.1205	-15.0506	-16.6127	-15.6801	-17.1674	-16.2095
NJ	PM25	-4373602	-5919270	-6533621	-6166844	-6751773	-6375037	-4.8211	-6.5249	-7.2021	-6.7978	-7.4426	-7.0273
NJ	Volatile Organic Compounds	-8343227	-11291795	-12463751	-11764076	-12879905	-12161231	-9.1968	-12.4471	-13.7389	-12.9677	-14.1977	-13.4055
NY	Carbon Monoxide (CO)	-569189833	-770346351	-850299263	-802566176	-878690072	-829660818	-627.4242	-849.1613	-937.2942	-884.6775	-968.5897	-914.5442
NY	Oxides of Nitrogen (NOx)	-36954626	-50014704	-55205644	-52106575	-57048916	-53865694	-40.7355	-55.1318	-60.8538	-57.4377	-62.8856	-59.3767
NY	Sulfur Dioxide (SO2)	-1334875	-1806631	-1994138	-1882194	-2060721	-1945737	-1.4714	-1.9915	-2.1982	-2.0748	-2.2716	-2.1448
NY	Atmospheric CO2	-89532084532	-121173483158	-133749868967	-126241578171	-138215669616	-130503495008	-98692.2012	-133570.8628	-147433.9511	-139157.4796	-152356.6523	-143855.4374
NY	Methane (CH4)	-1177782	-1594020	-1759461	-1660690	-1818208	-1716755	-1.2983	-1.7571	-1.9395	-1.8306	-2.0042	-1.8924
NY	Nitrous Oxide (N2O)	-390533	-528550	-583407	-550657	-602887	-569247	-0.4305	-0.5826	-0.6431	-0.6070	-0.6646	-0.6275
NY	CO2 Equivalent	-89677600670	-121370425934	-133967252093	-126446758102	-138440310990	-130715601815	-98852.6052	-133787.9550	-147673.5750	-139383.6517	-152604.2770	-144089.2451
NY	PM10	-8681655	-11749825	-12969319	-12241263	-13402355	-12654528	-9.5699	-12.9520	-14.2962	-13.4937	-14.7736	-13.9492
NY	PM25	-3932208	-5321884	-5874233	-5544473	-6070369	-5731654	-4.3345	-5.8664	-6.4752	-6.1117	-6.6914	-6.3181
NY	Volatile Organic Compounds	-7193222	-9735368	-10745785	-10142551	-11104578	-10484964	-7.9292	-10.7314	-11.8452	-11.1802	-12.2407	-11.5577
RI	Carbon Monoxide (CO)	-55513293	-75132162	-82929999	-78274574	-85698965	-80917124	-61.1929	-82.8190	-91.4146	-86.2829	-94.4669	-89.1958
RI	Oxides of Nitrogen (NOx)	-3730772	-5049259	-5573313	-5260445	-5759401	-5438037	-4.1125	-5.5659	-6.1435	-5.7986	-6.3487	-5.9944
RI	Sulfur Dioxide (SO2)	-133688	-180935	-199714	-188503	-206382	-194866	-0.1474	-0.1994	-0.2201	-0.2078	-0.2275	-0.2148
RI	Atmospheric CO2	-9190645616	-12438697787	-13729688672	-12958947767	-14188111944	-13396441962	-10130.9497	-13711.3133	-15134.3868	-14284.7906	-15639.7118	-14767.0453
RI	Methane (CH4)	-123486	-167127	-184473	-174117	-190633	-179996	-0.1361	-0.1842	-0.2033	-0.1919	-0.2101	-0.1984
RI	Nitrous Oxide (N2O)	-41884	-56687	-62570	-59058	-64659	-61051	-0.0462	-0.0625	-0.0690	-0.0651	-0.0713	-0.0673
RI	CO2 Equivalent	-9206193011	-12459739763	-13752914559	-12980869827	-14212113325	-13419104111	-10148.0878	-13734.5081	-15159.9889	-14308.9555	-15666.1688	-14792.0260
RI	PM10	-927999	-1255962	-1386316	-1308493	-1432604	-1352668	-1.0229	-1.3845	-1.5282	-1.4424	-1.5792	-1.4911
RI	PM25	-413212	-559245	-617288	-582635	-637898	-602305	-0.4555	-0.6165	-0.6804	-0.6422	-0.7032	-0.6639
RI	Volatile Organic Compounds	-761711	-1030906	-1137902	-1074024	-1175896	-1110283	-0.8396	-1.1364	-1.2543	-1.1839	-1.2962	-1.2239
MA	Carbon Monoxide (CO)	-175250018	-237184862	-261801868	-247105147	-270543222	-255447419	-193.1800	-261.4515	-288.5871	-272.3867	-298.2228	-281.5825
MA	Oxides of Nitrogen (NOx)	-11886577	-16087394	-17757076	-16760251	-18349971	-17326077	-13.1027	-17.7333	-19.5738	-18.4750	-20.2274	-19.0987
MA	Sulfur Dioxide (SO2)	-421165	-570008	-629168	-593849	-650175	-613897	-0.4643	-0.6283	-0.6935	-0.6546	-0.7167	-0.6767
MA	Atmospheric CO2	-28979186111	-39220676459	-43291322495	-40861085809	-44736784966	-42240556441	-31944.0755	-43233.3829	-47720.5008	-45041.6242	-49313.8499	-46562.2298
MA	Methane (CH4)	-391398	-529722	-584701	-551877	-604223	-570509	-0.4314	-0.5839	-0.6445	-0.6083	-0.6660	-0.6289
MA	Nitrous Oxide (N2O)	-130629	-176794	-195143	-184188	-201659	-190407	-0.1440	-0.1949	-0.2151	-0.2030	-0.2223	-0.2099
MA	CO2 Equivalent	-29027806578	-39286479812	-43363955463	-40929641395	-44811843091	-42311426464	-31997.6704	-43305.9187	-47800.5649	-45117.1937	-49396.5873	-46640.3506
MA	PM10	-2919158	-3950813	-4360862	-4116057	-4506467	-4255015	-3.2178	-4.3550	-4.8070	-4.5372	-4.9675	-4.6903
MA	PM25	-1316639	-1781950	-1966896	-1856480	-2032569	-1919155	-1.4513	-1.9643	-2.1681	-2.0464	-2.2405	-2.1155
MA	Volatile Organic Compounds	-2384821	-3227637	-3562628	-3362634	-3681582	-3476156	-2.6288	-3.5579	-3.9271	-3.7067	-4.0582	-3.8318
Total (All States)	Carbon Monoxide (CO)	-2263299704	-3063169031	-3381090035	-3191286431	-3493981915	-3299024290	-2494.8601	-3376.5649	-3727.0127	-3517.7901	-3851.4547	-3636.5507
Total (All States)	Oxides of Nitrogen (NOx)	-150339062	-203470163	-224587979	-211980326	-232086791	-219136784	-165.7204	-224.2874	-247.5658	-233.6682	-255.8318	-241.5569
Total (All States)	Sulfur Dioxide (SO2)	-5364237	-7260003	-8013507	-7563654	-8281071	-7819003	-5.9131	-8.0028	-8.8334	-8.3375	-9.1283	-8.6190
Total (All States)	Atmospheric CO2	-365298925638	-494398666631	-545711447391	-515076948310	-563932314108	-532465950810	-402673.0222	-544981.0861	-601543.7286	-567774.9834	-621628.7903	-586943.0720
Total (All States)	Methane (CH4)	-4873145	-6595356	-7279877	-6871208	-7522946	-7103180	-5.3717	-7.2701	-8.0247	-7.5742	-8.2926	-7.8299
Total (All States)	Nitrous Oxide (N2O)	-1602752	-2169178	-2394313	-2259904	-2474258	-2336199	-1.7667	-2.3911	-2.6393	-2.4911	-2.7274	-2.5752
Total (All States)	CO2 Equivalent	-365896952440	-495208041181	-546604825524	-515920175046	-564855521418	-533337644888	-403332.2337	-545873.2686	-602528.5091	-568704.4815	-622646.4518	-587903.9500
Total (All States)	PM10	-35060879	-47451691	-52376620	-49436364	-54125433	-51105336	-38.6480	-52.3065	-57.7353	-54.4942	-59.6631	-56.3340
Total (All States)	PM25	-15615579	-21134257	-23327745	-22018200	-24106640	-22761535	-17.2132	-23.2965	-25.7144	-24.2709	-26.5730	-25.0903
Total (All States)	Volatile Organic Compounds	-29908635	-40478601	-44679805	-42171623	-46171628	-43595338	-32.9686	-44.6200	-49.2510	-46.4862	-50.8955	-48.0556

2040 Train Emissions - WITH EXISTING ENERGY PROFILE

State	Train Type	NOx (lb/Day)						SO2 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	2.46E+01	5.47E+01	7.94E+01	7.94E+01	7.94E+01	5.61E+01	5.72E+01	1.28E+02	1.85E+02	1.85E+02	1.85E+02	1.31E+02
DC	Diesel Trains	0.00E+00	-3.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.25E+02	2.43E+02	3.72E+02	3.72E+02	3.72E+02	2.52E+02	1.98E+02	3.86E+02	5.91E+02	5.91E+02	5.91E+02	4.01E+02
MD	Diesel Trains	0.00E+00	-8.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	4.76E+01	1.00E+02	1.36E+02	1.36E+02	1.36E+02	8.53E+01	1.58E+02	3.33E+02	4.50E+02	4.50E+02	4.50E+02	2.83E+02
DE	Diesel Trains	0.00E+00	3.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	7.27E+01	1.63E+02	2.53E+02	2.53E+02	2.53E+02	1.48E+02	2.23E+02	5.00E+02	7.78E+02	7.78E+02	7.78E+02	4.54E+02
PA	Diesel Trains	2.93E+00	2.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E-03	9.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	3.27E+01	6.74E+01	1.11E+02	1.11E+02	1.11E+02	7.04E+01	5.15E+01	1.06E+02	1.74E+02	1.74E+02	1.74E+02	1.11E+02
NJ	Diesel Trains	-2.93E+00	-3.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.82E-03	-1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	3.69E+01	7.87E+01	1.51E+02	1.75E+02	1.75E+02	1.08E+02	6.79E+01	1.45E+02	2.77E+02	3.22E+02	3.22E+02	1.99E+02
NY	Diesel Trains	0.00E+00	-5.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	1.06E+02	1.63E+02	1.95E+02	2.09E+02	1.93E+02	1.01E+02	9.50E+01	1.45E+02	1.74E+02	1.87E+02	1.73E+02	9.04E+01
CT	Diesel Trains	0.00E+00	-7.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	7.89E+00	5.28E+00	1.96E+01	1.96E+01	1.05E+01	5.47E+00	3.35E-01	2.25E-01	8.32E-01	8.32E-01	4.48E-01	2.33E-01
RI	Diesel Trains	0.00E+00	-6.58E+01	0.00E+00	4.78E-03	4.78E-03	4.78E-03	0.00E+00	-2.21E-01	0.00E+00	1.60E-05	1.60E-05	1.60E-05
MA	Electric Trains	4.73E+01	6.44E+01	1.54E+02	1.54E+02	2.33E+02	1.62E+02	1.26E+02	1.71E+02	4.10E+02	4.10E+02	6.18E+02	4.29E+02
MA	Diesel Trains	0.00E+00	-1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	5.01E+02	9.39E+02	1.47E+03	1.51E+03	1.56E+03	9.88E+02	9.77E+02	1.91E+03	3.04E+03	3.10E+03	3.29E+03	2.10E+03
Total (All States)	Diesel Trains	-1.42E-14	-1.57E+02	0.00E+00	4.78E-03	4.78E-03	4.78E-03	-5.55E-17	-5.26E-01	0.00E+00	1.60E-05	1.60E-05	1.60E-05

2040 Train Emissions - WITH FUTURE ENERGY PROFILE

State	Train Type	NOx (lb/Day)						SO2 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.96E+01	4.38E+01	6.35E+01	6.35E+01	6.35E+01	4.49E+01	4.58E+01	1.02E+02	1.48E+02	1.48E+02	1.48E+02	1.05E+02
DC	Diesel Trains	0.00E+00	-3.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.06E+02	2.06E+02	3.16E+02	3.16E+02	3.16E+02	2.14E+02	1.68E+02	3.28E+02	5.01E+02	5.01E+02	5.01E+02	3.40E+02
MD	Diesel Trains	0.00E+00	-8.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.69E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	3.58E+01	7.55E+01	1.02E+02	1.02E+02	1.02E+02	6.42E+01	1.19E+02	2.51E+02	3.39E+02	3.39E+02	3.39E+02	2.13E+02
DE	Diesel Trains	0.00E+00	3.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	6.10E+01	1.37E+02	2.13E+02	2.13E+02	2.13E+02	1.24E+02	1.87E+02	4.20E+02	6.53E+02	6.53E+02	6.53E+02	3.81E+02
PA	Diesel Trains	2.93E+00	2.75E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E-03	9.21E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	2.48E+01	5.12E+01	8.41E+01	8.41E+01	8.41E+01	5.35E+01	3.91E+01	8.06E+01	1.32E+02	1.32E+02	1.32E+02	8.42E+01
NJ	Diesel Trains	-2.93E+00	-3.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-9.82E-03	-1.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	2.57E+01	5.48E+01	1.05E+02	1.22E+02	1.22E+02	7.53E+01	4.73E+01	1.01E+02	1.93E+02	2.24E+02	2.24E+02	1.39E+02
NY	Diesel Trains	0.00E+00	-5.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	7.85E+01	1.20E+02	1.44E+02	1.54E+02	1.43E+02	7.47E+01	7.02E+01	1.08E+02	1.29E+02	1.38E+02	1.28E+02	6.69E+01
CT	Diesel Trains	0.00E+00	-7.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.57E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	6.63E+00	4.44E+00	1.64E+01	1.64E+01	8.85E+00	4.60E+00	2.82E-01	1.89E-01	6.99E-01	6.99E-01	3.76E-01	1.96E-01
RI	Diesel Trains	0.00E+00	-6.58E+01	0.00E+00	4.78E-03	4.78E-03	4.78E-03	0.00E+00	-2.21E-01	0.00E+00	1.60E-05	1.60E-05	1.60E-05
MA	Electric Trains	3.93E+01	5.35E+01	1.28E+02	1.29E+02	1.94E+02	1.34E+02	1.04E+02	1.42E+02	3.41E+02	3.41E+02	5.15E+02	3.57E+02
MA	Diesel Trains	0.00E+00	-1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.69E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	3.97E+02	7.47E+02	1.17E+03	1.20E+03	1.25E+03	7.90E+02	7.82E+02	1.53E+03	2.44E+03	2.48E+03	2.64E+03	1.69E+03
Total (All States)	Diesel Trains	-1.42E-14	-1.57E+02	0.00E+00	4.78E-03	4.78E-03	4.78E-03	-5.55E-17	-5.26E-01	0.00E+00	1.60E-05	1.60E-05	1.60E-05

2040 Train Emissions - WITH EXISTING ENERGY PROFILE

State	Train Type	CO2 (lb/Day)						CH4 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.46E+04	3.25E+04	4.71E+04	4.71E+04	4.71E+04	3.32E+04	6.26E-01	1.40E+00	2.02E+00	2.02E+00	2.02E+00	1.43E+00
DC	Diesel Trains	0.00E+00	-1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.69E+05	3.29E+05	5.04E+05	5.04E+05	5.04E+05	3.42E+05	4.24E+00	8.26E+00	1.26E+01	1.26E+01	1.26E+01	8.57E+00
MD	Diesel Trains	0.00E+00	-2.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	4.52E+04	9.53E+04	1.29E+05	1.29E+05	1.29E+05	8.10E+04	6.67E-01	1.41E+00	1.90E+00	1.90E+00	1.90E+00	1.19E+00
DE	Diesel Trains	0.00E+00	1.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	7.15E+04	1.60E+05	2.49E+05	2.49E+05	2.49E+05	1.46E+05	1.47E+00	3.30E+00	5.13E+00	5.13E+00	5.13E+00	3.00E+00
PA	Diesel Trains	1.07E+03	1.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-02	7.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	6.11E+04	1.26E+05	2.07E+05	2.07E+05	2.07E+05	1.32E+05	2.24E+00	4.62E+00	7.59E+00	7.59E+00	7.59E+00	4.82E+00
NJ	Diesel Trains	-1.07E+03	-1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.36E-02	-9.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	5.38E+04	1.15E+05	2.20E+05	2.55E+05	2.55E+05	1.58E+05	2.08E+00	4.43E+00	8.47E+00	9.84E+00	9.84E+00	6.08E+00
NY	Diesel Trains	0.00E+00	-1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	1.78E+05	2.73E+05	3.27E+05	3.50E+05	3.24E+05	1.70E+05	1.72E+01	2.64E+01	3.17E+01	3.39E+01	3.14E+01	1.64E+01
CT	Diesel Trains	0.00E+00	-2.80E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	4.13E+04	2.77E+04	1.02E+05	1.02E+05	5.51E+04	2.87E+04	8.12E-01	5.44E-01	2.01E+00	2.01E+00	1.08E+00	5.63E-01
RI	Diesel Trains	0.00E+00	-2.40E+04	0.00E+00	1.75E+00	1.75E+00	1.75E+00	0.00E+00	-1.88E+00	0.00E+00	1.37E-04	1.37E-04	1.37E-04
MA	Electric Trains	6.66E+04	9.07E+04	2.17E+05	2.18E+05	3.28E+05	2.28E+05	4.24E+00	5.78E+00	1.39E+01	1.39E+01	2.09E+01	1.45E+01
MA	Diesel Trains	0.00E+00	-5.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	7.01E+05	1.25E+06	2.00E+06	2.06E+06	2.10E+06	1.32E+06	3.36E+01	5.61E+01	8.53E+01	8.89E+01	9.25E+01	5.66E+01
Total (All States)	Diesel Trains	3.64E-12	-5.72E+04	0.00E+00	1.75E+00	1.75E+00	1.75E+00	-4.44E-16	-4.48E+00	0.00E+00	1.37E-04	1.37E-04	1.37E-04

2040 Train Emissions - WITH FUTURE ENERGY PROFILE

State	Train Type	CO2 (lb/Day)						CH4 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.16E+04	2.60E+04	3.76E+04	3.76E+04	3.76E+04	2.66E+04	5.01E-01	1.12E+00	1.62E+00	1.62E+00	1.62E+00	1.14E+00
DC	Diesel Trains	0.00E+00	-1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.11E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.43E+05	2.80E+05	4.28E+05	4.28E+05	4.28E+05	2.90E+05	3.60E+00	7.01E+00	1.07E+01	1.07E+01	1.07E+01	7.27E+00
MD	Diesel Trains	0.00E+00	-2.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	3.41E+04	7.18E+04	9.71E+04	9.71E+04	9.71E+04	6.10E+04	5.02E-01	1.06E+00	1.43E+00	1.43E+00	1.43E+00	8.99E-01
DE	Diesel Trains	0.00E+00	1.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	6.00E+04	1.34E+05	2.09E+05	2.09E+05	2.09E+05	1.22E+05	1.24E+00	2.77E+00	4.31E+00	4.31E+00	4.31E+00	2.52E+00
PA	Diesel Trains	1.07E+03	1.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.36E-02	7.85E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	4.64E+04	9.56E+04	1.57E+05	1.57E+05	1.57E+05	9.99E+04	1.70E+00	3.51E+00	5.76E+00	5.76E+00	5.76E+00	3.66E+00
NJ	Diesel Trains	-1.07E+03	-1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.36E-02	-9.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	3.74E+04	7.99E+04	1.53E+05	1.77E+05	1.77E+05	1.10E+05	1.45E+00	3.08E+00	5.90E+00	6.85E+00	6.85E+00	4.23E+00
NY	Diesel Trains	0.00E+00	-1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	1.32E+05	2.02E+05	2.42E+05	2.59E+05	2.40E+05	1.25E+05	1.27E+01	1.95E+01	2.34E+01	2.51E+01	2.32E+01	1.21E+01
CT	Diesel Trains	0.00E+00	-2.80E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	3.47E+04	2.32E+04	8.61E+04	8.61E+04	4.63E+04	2.41E+04	6.82E-01	4.57E-01	1.69E+00	1.69E+00	9.10E-01	4.73E-01
RI	Diesel Trains	0.00E+00	-2.40E+04	0.00E+00	1.75E+00	1.75E+00	1.75E+00	0.00E+00	-1.88E+00	0.00E+00	1.37E-04	1.37E-04	1.37E-04
MA	Electric Trains	5.54E+04	7.54E+04	1.81E+05	1.81E+05	2.73E+05	1.89E+05	3.53E+00	4.81E+00	1.15E+01	1.15E+01	1.74E+01	1.21E+01
MA	Diesel Trains	0.00E+00	-5.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	5.55E+05	9.88E+05	1.59E+06	1.63E+06	1.66E+06	1.05E+06	2.59E+01	4.33E+01	6.64E+01	6.90E+01	7.22E+01	4.44E+01
Total (All States)	Diesel Trains	3.64E-12	-5.72E+04	0.00E+00	1.75E+00	1.75E+00	1.75E+00	-4.44E-16	-4.48E+00	0.00E+00	1.37E-04	1.37E-04	1.37E-04

2040 Train Emissions - WITH EXISTING ENERGY PROFILE

State	Train Type	N2O (lb/Day)						CO2e (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.25E-01	2.79E-01	4.05E-01	4.05E-01	4.05E-01	2.86E-01	1.46E+04	3.26E+04	4.72E+04	4.72E+04	4.72E+04	3.34E+04
DC	Diesel Trains	0.00E+00	-3.62E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	2.91E+00	5.67E+00	8.67E+00	8.67E+00	8.67E+00	5.88E+00	1.70E+05	3.31E+05	5.07E+05	5.07E+05	5.07E+05	3.44E+05
MD	Diesel Trains	0.00E+00	-7.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.96E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	6.06E-01	1.28E+00	1.73E+00	1.73E+00	1.73E+00	1.09E+00	4.54E+04	9.58E+04	1.30E+05	1.30E+05	1.30E+05	8.14E+04
DE	Diesel Trains	0.00E+00	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	1.14E+00	2.56E+00	3.98E+00	3.98E+00	3.98E+00	2.33E+00	7.19E+04	1.61E+05	2.50E+05	2.50E+05	2.50E+05	1.46E+05
PA	Diesel Trains	2.72E-02	2.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+03	1.01E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	6.21E-01	1.28E+00	2.10E+00	2.10E+00	2.10E+00	1.34E+00	6.13E+04	1.26E+05	2.08E+05	2.08E+05	2.08E+05	1.32E+05
NJ	Diesel Trains	-2.72E-02	-3.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.08E+03	-1.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	5.43E-01	1.16E+00	2.22E+00	2.57E+00	2.57E+00	1.59E+00	5.40E+04	1.15E+05	2.20E+05	2.56E+05	2.56E+05	1.58E+05
NY	Diesel Trains	0.00E+00	-4.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	2.96E+00	4.53E+00	5.43E+00	5.81E+00	5.37E+00	2.81E+00	1.80E+05	2.75E+05	3.30E+05	3.53E+05	3.26E+05	1.71E+05
CT	Diesel Trains	0.00E+00	-7.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.83E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	8.18E-02	5.48E-02	2.03E-01	2.03E-01	1.09E-01	5.68E-02	4.13E+04	2.77E+04	1.03E+05	1.03E+05	5.52E+04	2.87E+04
RI	Diesel Trains	0.00E+00	-6.11E-01	0.00E+00	4.44E-05	4.44E-05	4.44E-05	0.00E+00	-2.43E+04	0.00E+00	1.76E+00	1.76E+00	1.76E+00
MA	Electric Trains	9.21E-01	1.25E+00	3.01E+00	3.01E+00	4.54E+00	3.15E+00	6.70E+04	9.12E+04	2.19E+05	2.19E+05	3.30E+05	2.29E+05
MA	Diesel Trains	0.00E+00	-1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.15E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	9.90E+00	1.81E+01	2.77E+01	2.85E+01	2.95E+01	1.85E+01	7.05E+05	1.26E+06	2.01E+06	2.07E+06	2.11E+06	1.32E+06
Total (All States)	Diesel Trains	1.11E-16	-1.46E+00	0.00E+00	4.44E-05	4.44E-05	4.44E-05	0.00E+00	-5.78E+04	0.00E+00	1.76E+00	1.76E+00	1.76E+00

2040 Train Emissions - WITH FUTURE ENERGY PROFILE

State	Train Type	N2O (lb/Day)						CO2e (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.00E-01	2.23E-01	3.24E-01	3.24E-01	3.24E-01	2.29E-01	1.17E+04	2.61E+04	3.78E+04	3.78E+04	3.78E+04	2.67E+04
DC	Diesel Trains	0.00E+00	-3.62E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	2.47E+00	4.81E+00	7.36E+00	7.36E+00	7.36E+00	4.99E+00	1.44E+05	2.81E+05	4.30E+05	4.30E+05	4.30E+05	2.92E+05
MD	Diesel Trains	0.00E+00	-7.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.96E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	4.57E-01	9.62E-01	1.30E+00	1.30E+00	1.30E+00	8.18E-01	3.42E+04	7.21E+04	9.75E+04	9.75E+04	9.75E+04	6.13E+04
DE	Diesel Trains	0.00E+00	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	9.58E-01	2.15E+00	3.34E+00	3.34E+00	3.34E+00	1.95E+00	6.03E+04	1.35E+05	2.10E+05	2.10E+05	2.10E+05	1.23E+05
PA	Diesel Trains	2.72E-02	2.55E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+03	1.01E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	4.71E-01	9.72E-01	1.60E+00	1.60E+00	1.60E+00	1.01E+00	4.66E+04	9.60E+04	1.58E+05	1.58E+05	1.58E+05	1.00E+05
NJ	Diesel Trains	-2.72E-02	-3.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.08E+03	-1.25E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	3.78E-01	8.07E-01	1.54E+00	1.79E+00	1.79E+00	1.11E+00	3.76E+04	8.02E+04	1.54E+05	1.78E+05	1.78E+05	1.10E+05
NY	Diesel Trains	0.00E+00	-4.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	2.18E+00	3.35E+00	4.01E+00	4.29E+00	3.97E+00	2.08E+00	1.33E+05	2.03E+05	2.44E+05	2.61E+05	2.41E+05	1.26E+05
CT	Diesel Trains	0.00E+00	-7.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.83E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	6.87E-02	4.60E-02	1.71E-01	1.71E-01	9.18E-02	4.77E-02	3.47E+04	2.33E+04	8.62E+04	8.62E+04	4.64E+04	2.41E+04
RI	Diesel Trains	0.00E+00	-6.11E-01	0.00E+00	4.44E-05	4.44E-05	4.44E-05	0.00E+00	-2.43E+04	0.00E+00	1.76E+00	1.76E+00	1.76E+00
MA	Electric Trains	7.67E-01	1.04E+00	2.50E+00	2.50E+00	3.78E+00	2.62E+00	5.57E+04	7.58E+04	1.82E+05	1.82E+05	2.74E+05	1.90E+05
MA	Diesel Trains	0.00E+00	-1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.15E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	7.85E+00	1.44E+01	2.21E+01	2.27E+01	2.36E+01	1.49E+01	5.58E+05	9.93E+05	1.60E+06	1.64E+06	1.67E+06	1.05E+06
Total (All States)	Diesel Trains	1.11E-16	-1.46E+00	0.00E+00	4.44E-05	4.44E-05	4.44E-05	0.00E+00	-5.78E+04	0.00E+00	1.76E+00	1.76E+00	1.76E+00

2040 Train Emissions - WITH EXISTING ENERGY PROFILE

State	Train Type	CO (lb/Day)						PM10 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	9.82E-03	2.19E-02	3.18E-02	3.18E-02	3.18E-02	2.24E-02	3.42E-02	7.63E-02	1.11E-01	1.11E-01	1.11E-01	7.82E-02
DC	Diesel Trains	0.00E+00	-3.71E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.57E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	2.25E+01	4.38E+01	6.70E+01	6.70E+01	6.70E+01	4.54E+01	1.70E+01	3.32E+01	5.08E+01	5.08E+01	5.08E+01	3.45E+01
MD	Diesel Trains	0.00E+00	-7.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	7.07E+00	1.49E+01	2.02E+01	2.02E+01	2.02E+01	1.27E+01	6.10E+00	1.29E+01	1.74E+01	1.74E+01	1.74E+01	1.09E+01
DE	Diesel Trains	0.00E+00	3.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	1.18E+01	2.64E+01	4.11E+01	4.11E+01	4.11E+01	2.40E+01	8.72E+00	1.95E+01	3.04E+01	3.04E+01	3.04E+01	1.77E+01
PA	Diesel Trains	2.78E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-02	3.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	9.21E+00	1.90E+01	3.12E+01	3.12E+01	3.12E+01	1.98E+01	2.73E+00	5.63E+00	9.25E+00	9.25E+00	9.25E+00	5.88E+00
NJ	Diesel Trains	-2.78E+00	-3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.18E-02	-4.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	1.35E+01	2.88E+01	5.52E+01	6.41E+01	6.41E+01	3.96E+01	2.86E+00	6.11E+00	1.17E+01	1.36E+01	1.36E+01	8.39E+00
NY	Diesel Trains	0.00E+00	-5.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	9.60E+00	1.47E+01	1.76E+01	1.89E+01	1.75E+01	9.14E+00	4.51E+00	6.91E+00	8.28E+00	8.87E+00	8.21E+00	4.30E+00
CT	Diesel Trains	0.00E+00	-7.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	1.21E+01	8.08E+00	2.99E+01	2.99E+01	1.61E+01	8.37E+00	8.56E-01	5.73E-01	2.12E+00	2.12E+00	1.14E+00	5.94E-01
RI	Diesel Trains	0.00E+00	-6.26E+01	0.00E+00	4.55E-03	4.55E-03	4.55E-03	0.00E+00	-9.40E-01	0.00E+00	6.83E-05	6.83E-05	6.83E-05
MA	Electric Trains	7.10E+00	9.67E+00	2.32E+01	2.32E+01	3.50E+01	2.43E+01	2.55E+00	3.48E+00	8.34E+00	8.34E+00	1.26E+01	8.73E+00
MA	Diesel Trains	0.00E+00	-1.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	9.28E+01	1.65E+02	2.85E+02	2.96E+02	2.92E+02	1.83E+02	4.54E+01	8.84E+01	1.38E+02	1.41E+02	1.43E+02	9.11E+01
Total (All States)	Diesel Trains	-2.84E-14	-1.49E+02	0.00E+00	4.55E-03	4.55E-03	4.55E-03	-2.22E-16	-2.24E+00	0.00E+00	6.83E-05	6.83E-05	6.83E-05

2040 Train Emissions - WITH FUTURE ENERGY PROFILE

State	Train Type	CO (lb/Day)						PM10 (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	7.86E-03	1.75E-02	2.54E-02	2.54E-02	2.54E-02	1.79E-02	2.74E-02	6.11E-02	8.85E-02	8.85E-02	8.85E-02	6.25E-02
DC	Diesel Trains	0.00E+00	-3.71E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.57E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.91E+01	3.72E+01	5.69E+01	5.69E+01	5.69E+01	3.86E+01	1.45E+01	2.82E+01	4.31E+01	4.31E+01	4.31E+01	2.92E+01
MD	Diesel Trains	0.00E+00	-7.63E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	5.32E+00	1.12E+01	1.52E+01	1.52E+01	1.52E+01	9.53E+00	4.59E+00	9.67E+00	1.31E+01	1.31E+01	1.31E+01	8.22E+00
DE	Diesel Trains	0.00E+00	3.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	9.90E+00	2.22E+01	3.45E+01	3.45E+01	3.45E+01	2.02E+01	7.31E+00	1.64E+01	2.55E+01	2.55E+01	2.55E+01	1.49E+01
PA	Diesel Trains	2.78E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E-02	3.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	6.99E+00	1.44E+01	2.37E+01	2.37E+01	2.37E+01	1.51E+01	2.07E+00	4.28E+00	7.02E+00	7.02E+00	7.02E+00	4.47E+00
NJ	Diesel Trains	-2.78E+00	-3.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.18E-02	-4.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	9.41E+00	2.01E+01	3.84E+01	4.46E+01	4.46E+01	2.76E+01	1.99E+00	4.25E+00	8.14E+00	9.45E+00	9.45E+00	5.84E+00
NY	Diesel Trains	0.00E+00	-5.06E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	7.10E+00	1.09E+01	1.30E+01	1.40E+01	1.29E+01	6.76E+00	3.34E+00	5.11E+00	6.12E+00	6.56E+00	6.07E+00	3.18E+00
CT	Diesel Trains	0.00E+00	-7.30E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	1.01E+01	6.79E+00	2.51E+01	2.51E+01	1.35E+01	7.03E+00	7.19E-01	4.82E-01	1.78E+00	1.78E+00	9.60E-01	4.99E-01
RI	Diesel Trains	0.00E+00	-6.26E+01	0.00E+00	4.55E-03	4.55E-03	4.55E-03	0.00E+00	-9.40E-01	0.00E+00	6.83E-05	6.83E-05	6.83E-05
MA	Electric Trains	5.91E+00	8.05E+00	1.93E+01	1.93E+01	2.91E+01	2.02E+01	2.12E+00	2.89E+00	6.93E+00	6.94E+00	1.05E+01	7.26E+00
MA	Diesel Trains	0.00E+00	-1.33E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	7.39E+01	1.31E+02	2.26E+02	2.33E+02	2.30E+02	1.45E+02	3.66E+01	7.13E+01	1.12E+02	1.14E+02	1.16E+02	7.37E+01
Total (All States)	Diesel Trains	-2.84E-14	-1.49E+02	0.00E+00	4.55E-03	4.55E-03	4.55E-03	-2.22E-16	-2.24E+00	0.00E+00	6.83E-05	6.83E-05	6.83E-05

2040 Train Emissions - WITH EXISTING ENERGY PROFILE

State	Train Type	PM25 (lb/Day)						VOC (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	2.46E-02	5.49E-02	7.96E-02	7.96E-02	7.96E-02	5.62E-02	1.22E-03	2.72E-03	3.94E-03	3.94E-03	3.94E-03	2.79E-03
DC	Diesel Trains	0.00E+00	-5.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.46E+01	2.85E+01	4.36E+01	4.36E+01	4.36E+01	2.96E+01	1.90E+00	3.71E+00	5.67E+00	5.67E+00	5.67E+00	3.85E+00
MD	Diesel Trains	0.00E+00	-1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	6.07E+00	1.28E+01	1.73E+01	1.73E+01	1.73E+01	1.09E+01	8.34E-01	1.76E+00	2.38E+00	2.38E+00	2.38E+00	1.49E+00
DE	Diesel Trains	0.00E+00	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	6.16E+00	1.38E+01	2.15E+01	2.15E+01	2.15E+01	1.25E+01	4.03E-01	9.03E-01	1.40E+00	1.40E+00	1.40E+00	8.20E-01
PA	Diesel Trains	4.06E-02	3.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	9.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	2.67E+00	5.51E+00	9.05E+00	9.05E+00	9.05E+00	5.75E+00	9.25E-01	1.91E+00	3.13E+00	3.13E+00	3.13E+00	1.99E+00
NJ	Diesel Trains	-4.06E-02	-4.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.05E-01	-1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	1.98E+00	4.22E+00	8.07E+00	9.36E+00	9.36E+00	5.79E+00	1.28E+00	2.73E+00	5.22E+00	6.06E+00	6.06E+00	3.75E+00
NY	Diesel Trains	0.00E+00	-7.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	3.91E+00	5.99E+00	7.17E+00	7.68E+00	7.11E+00	3.72E+00	1.41E+00	2.16E+00	2.59E+00	2.77E+00	2.57E+00	1.34E+00
CT	Diesel Trains	0.00E+00	-1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	8.56E-01	5.73E-01	2.12E+00	2.12E+00	1.14E+00	5.94E-01	7.86E-01	5.26E-01	1.95E+00	1.95E+00	1.05E+00	5.45E-01
RI	Diesel Trains	0.00E+00	-9.12E-01	0.00E+00	6.63E-05	6.63E-05	6.63E-05	0.00E+00	-2.35E+00	0.00E+00	1.71E-04	1.71E-04	1.71E-04
MA	Electric Trains	2.46E+00	3.35E+00	8.04E+00	8.04E+00	1.21E+01	8.41E+00	1.05E+00	1.43E+00	3.44E+00	3.44E+00	5.18E+00	3.60E+00
MA	Diesel Trains	0.00E+00	-1.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	3.88E+01	7.48E+01	1.17E+02	1.19E+02	1.21E+02	7.73E+01	8.59E+00	1.51E+01	2.58E+01	2.68E+01	2.74E+01	1.74E+01
Total (All States)	Diesel Trains	0.00E+00	-2.17E+00	0.00E+00	6.63E-05	6.63E-05	6.63E-05	-8.88E-16	-5.60E+00	0.00E+00	1.71E-04	1.71E-04	1.71E-04

2040 Train Emissions - WITH FUTURE ENERGY PROFILE

State	Train Type	PM25 (lb/Day)						VOC (lb/Day)					
		Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4	Alt 1	Alt 2	Alt 3.1	Alt 3.2	Alt 3.3	Alt 3.4
DC	Electric Trains	1.97E-02	4.39E-02	6.37E-02	6.37E-02	6.37E-02	4.50E-02	9.76E-04	2.18E-03	3.16E-03	3.16E-03	3.16E-03	2.23E-03
DC	Diesel Trains	0.00E+00	-5.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MD	Electric Trains	1.24E+01	2.42E+01	3.70E+01	3.70E+01	3.70E+01	2.51E+01	1.62E+00	3.15E+00	4.81E+00	4.81E+00	4.81E+00	3.26E+00
MD	Diesel Trains	0.00E+00	-1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
DE	Electric Trains	4.57E+00	9.63E+00	1.30E+01	1.30E+01	1.30E+01	8.19E+00	6.28E-01	1.32E+00	1.79E+00	1.79E+00	1.79E+00	1.12E+00
DE	Diesel Trains	0.00E+00	5.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PA	Electric Trains	5.17E+00	1.16E+01	1.80E+01	1.80E+01	1.80E+01	1.05E+01	3.38E-01	7.57E-01	1.18E+00	1.18E+00	1.18E+00	6.88E-01
PA	Diesel Trains	4.06E-02	3.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	9.81E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NJ	Electric Trains	2.03E+00	4.18E+00	6.87E+00	6.87E+00	6.87E+00	4.37E+00	7.02E-01	1.45E+00	2.38E+00	2.38E+00	2.38E+00	1.51E+00
NJ	Diesel Trains	-4.06E-02	-4.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.05E-01	-1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NY	Electric Trains	1.38E+00	2.94E+00	5.62E+00	6.52E+00	6.52E+00	4.03E+00	8.91E-01	1.90E+00	3.64E+00	4.22E+00	4.22E+00	2.61E+00
NY	Diesel Trains	0.00E+00	-7.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CT	Electric Trains	2.89E+00	4.43E+00	5.30E+00	5.68E+00	5.25E+00	2.75E+00	1.04E+00	1.60E+00	1.92E+00	2.05E+00	1.90E+00	9.93E-01
CT	Diesel Trains	0.00E+00	-1.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-2.74E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RI	Electric Trains	7.19E-01	4.82E-01	1.78E+00	1.78E+00	9.60E-01	4.99E-01	6.60E-01	4.42E-01	1.64E+00	1.64E+00	8.81E-01	4.58E-01
RI	Diesel Trains	0.00E+00	-9.12E-01	0.00E+00	6.63E-05	6.63E-05	6.63E-05	0.00E+00	-2.35E+00	0.00E+00	1.71E-04	1.71E-04	1.71E-04
MA	Electric Trains	2.05E+00	2.79E+00	6.69E+00	6.69E+00	1.01E+01	7.00E+00	8.75E-01	1.19E+00	2.86E+00	2.86E+00	4.31E+00	2.99E+00
MA	Diesel Trains	0.00E+00	-1.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.99E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total (All States)	Electric Trains	3.12E+01	6.03E+01	9.44E+01	9.57E+01	9.78E+01	6.25E+01	6.75E+00	1.18E+01	2.02E+01	2.09E+01	2.15E+01	1.36E+01
Total (All States)	Diesel Trains	0.00E+00	-2.17E+00	0.00E+00	6.63E-05	6.63E-05	6.63E-05	-8.88E-16	-5.60E+00	0.00E+00	1.71E-04	1.71E-04	1.71E-04

State	Existing Renewable %	Future Renewable %	% of Renewable Increase
DC	0%	20%	20%
MD	5%	20%	15%
DE	0%	25%	25%
PA	2%	18%	16%
NJ	0%	25%	25%
NY	20%	50%	30%
CT	1%	27%	26%
RI	0%	16%	16%
MA	3%	20%	17%

State	Title	Established	Requirement	Cost Cap	Details	Enabling Statute, Code or Order
Connecticut	Renewable Portfolio Standard	1998	27% by 2020	3%; 1% (PV)	Class I renewable energy sources (including distributed generation): 20% by 2020 Class I or II (biomass, waste-to-energy and certain hydropower projects): 3% by 2010 Class III (combined heat and power, waste heat recovery and conservation): 4% by 2010	Conn. Gen. Stat. §16-245a et seq.; Conn. Gen. Stat. §16-1
Delaware	Renewables Energy Portfolio Standard	2005	25% by 2025-2026	3%; 1% (PV)	Photovoltaics: 3.5% requirement by 2025-2026. The state has a credit multiplier for solar installed before 2015 (3x credits), that applies only to the general REPS target.	Del. Code Ann. 26 §351 et seq.
Maryland	Renewable Energy Portfolio Standard	2004	20% by 2022	6.50%	Solar: 2% by 2020. Offshore wind: 2.5% maximum by 2017 (Maryland Public Service Commission rule pending)	Md. Public Utilities Code Ann. §7-701 et seq.
Massachusetts	Renewable Portfolio Standard	1997	Class I: 15% by 2020 and an additional 1% each year after Class II: 7.1% by 2009	8%	Photovoltaic: 400 MW required. Class I resources are new sources. Class II (resources in operation by 1997) requirement includes 3.6% renewable energy and 3.5% waste-to-energy.	Mass. Gen. Laws Ann. ch. 25A §11F
New Jersey	Renewables Portfolio Standard	1999	24.5% by 2020	12.60%	20.38% Class I or Class II (resource recovery or hydropower) renewables by 2020-2021. 4.1% solar-electric by 2027-2028. Offshore wind: 1,100 MW.	N.J. Rev. Stat. §48:3-49 et seq.
New York	Renewable Portfolio Standard; Reforming the Energy Vision (REV)	2004	29% by 2015; 50% by 2030 (REV)	1.70%	Distributed Generation: 8.4% of annual incremental requirement.	NY PSC Order Case 03-E-0188; 2015 New York State Energy Plan
Pennsylvania	Alternative Energy Portfolio Standard	2004	18% by 2020-2021	None	Tier I: 8% by 2020-2021 (includes photovoltaic). Tier II (includes waste coal, distributed generation, large-scale hydropower and municipal solid waste, among other technologies): 10% by 2020-2021. Photovoltaic: 0.5% by 2020-2021.	Pa. Cons. Stat. tit. 73 §1648.1 et seq.; Pa. Cons. Stat. tit. 66 §2814
Rhode Island	Renewable Energy Standard	2004	16% by 2019	9.50%	The state has a separate long-term contracting standard for renewable energy, which requires electric distribution companies to establish long-term contracts with new renewable energy facilities.	R.I. Gen. Laws §39-26-1 et seq.; R.I. Gen. Laws §39-26.1 et seq. (contracting standard)
Washington, D.C.	Renewable Portfolio Standard	2005	20% by 2020	7.60%	Solar: 2.5% by 2023.	D.C. Code §34-1431 et seq.

Source: National Conference of State Legislatures, State Renewable Portfolio Standards and Goals
http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx

Federal Attainment Status							
State	County	2008 Ozone (O3)	Particulate Matter (PM2.5) 1997 Annual	Particulate Matter (PM2.5) 2006 24-hour	Carbon Monoxide (CO)	Particulate Matter (PM_{10})	Lead (Pb)
DC	District of Columbia	Marginal Nonattainment	Maintenance	Attainment	Maintenance	Attainment	Attainment
MD	Prince George's	Marginal Nonattainment	Maintenance	Attainment	Maintenance (partial)	Attainment	Attainment
MD	Anne Arundel	Moderate Nonattainment	Maintenance	Attainment	Attainment	Attainment	Attainment
MD	Baltimore City	Moderate Nonattainment	Maintenance	Attainment	Maintenance	Attainment	Attainment
MD	Baltimore County	Moderate Nonattainment	Maintenance	Attainment	Maintenance (partial)	Attainment	Attainment
MD	Harford	Moderate Nonattainment	Maintenance	Attainment	Attainment	Attainment	Attainment
MD	Cecil	Marginal Nonattainment	Attainment	Attainment	Attainment	Attainment	Attainment
DE	New Castle	Marginal Nonattainment	Maintenance	Maintenance	Attainment	Attainment	Attainment
PA	Delaware	Marginal Nonattainment	Moderate Nonattainment	Moderate Nonattainment	Attainment	Attainment	Attainment
PA	Philadelphia	Marginal Nonattainment	Moderate Nonattainment	Moderate Nonattainment	Maintenance (partial)	Attainment	Attainment
PA	Bucks	Marginal Nonattainment	Moderate Nonattainment	Moderate Nonattainment	Attainment	Attainment	Attainment
NJ	Mercer	Marginal Nonattainment	Maintenance	Maintenance	Maintenance (partial)	Attainment	Attainment
NJ	Middlesex	Marginal Nonattainment	Maintenance	Maintenance	Maintenance (partial)	Attainment	Attainment
NJ	Union	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NJ	Essex	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NJ	Hudson	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NY	New York	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Moderate Nonattainment	Attainment
NY	Queens	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NY	Kings	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NY	Nassau	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NY	Suffolk	Marginal Nonattainment	Maintenance	Maintenance	Attainment	Attainment	Attainment
NY	Bronx	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
NY	Putnam	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment
NY	Westchester	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Attainment	Attainment
CT	Fairfield	Marginal Nonattainment	Maintenance	Maintenance	Maintenance (partial)	Attainment	Attainment
CT	New Haven	Marginal Nonattainment	Maintenance	Maintenance	Maintenance	Maintenance (partial)	Attainment
CT	Middlesex	Marginal Nonattainment	Attainment	Attainment	Maintenance (partial)	Attainment	Attainment
CT	New London	Marginal Nonattainment	Attainment	Attainment	Attainment	Attainment	Attainment
CT	Hartford	Marginal Nonattainment	Attainment	Attainment	Maintenance (partial)	Attainment	Attainment
CT	Tolland	Marginal Nonattainment	Attainment	Attainment	Maintenance (partial)	Attainment	Attainment
CT	Windham	Marginal Nonattainment	Attainment	Attainment	Attainment	Attainment	Attainment
RI	Washington	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment
RI	Kent	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment
RI	Providence	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment
MA	Bristol	Attainment	Attainment	Attainment	Attainment	Attainment	Attainment
MA	Norfolk	Attainment	Attainment	Attainment	Maintenance (partial)	Attainment	Attainment
MA	Suffolk	Attainment	Attainment	Attainment	Maintenance (partial)	Attainment	Attainment

			Verizon Phone Company 2055 L Street N.W. Washington D.C. Site ID 110010023			420 34th Street N.E. Washington D.C. Site ID 110010041			2500 1st Street N.W. Washington D.C. Site ID 110010043			Park Services Office 1100 Ohio Drive Washington D.C. Site ID 110010042		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	5	2.5	5.8	2.7	2.9	2.3	3.1	2.5	2.1			
		2nd Maximum	4.2	2.2	4.4	2.7	2.9	2.2	3	2.4	1.4			
		# of Exceedences	0	0	0	0	0	0	0	0	0			
	8-Hour	Maximum	2.2	2	2.8	2.5	2.8	1.9	2.5	1.9	1.2			
		2nd Maximum	1.9	1.9	2.5	2.3	2.5	1.9	2.4	1.8	1.1			
		# of Exceedences	0	0	0	0	0	0	0	0	0			
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour				52			45	42				
		Second Maximum				42			40	38				
		# of Exceedences				0			0	0				
	$PM_{2.5}$	Maximum 24-Hour				34	35.5	27.6	30.6	34.1	27.3	30.7	31.2	25.7
		Mean Annual				10.4	9.8	9.3	10.3	9.6	9.1	10.2	9.8	8.3
		# of Exceedences				0	0	0	0	0	0	0	0	0
Ozone (O_3) [ppm]	8-Hour	First Highest				0.101	0.083	0.071	0.107	0.098	0.068			
		Second Highest				0.099	0.082	0.069	0.101	0.088	0.066			
		Third Highest				0.096	0.082	0.062	0.101	0.087	0.066			
		Fourth Highest				0.095	0.076	0.062	0.096	0.087	0.066			
		# of Days Standard Exceeded				0	4	0	0	11	0			
Nitrogen Dioxode (NO_2) [100 ppb]		1-Hour Maximum				62	57	65	72	69	57			
		1-Hour Second Maximum				61	56	61	59	60	55			
		# of Days Standard Exceeded				0	0	0	0	0	0			
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum				34	25	15	6	14	16			
		24-Hour Maximum				10	5	5	4	5	3			
		Annual Mean				NA	NA	NA	NA	NA	NA			
Lead (Pb) [ug/m3]		1st Maximum							NA	0.008	0.009			
		2nd Maximum							NA	0.007	0.009			
		3rd Maximum							NA	0.006	0.007			
		4th Maximum							NA	0.006	0.007			

NA Not available

			600 Dorsey Avenue Essex, MD Balitmore County Site ID 2400530012			Padonia Elementary 9834 Greenside Drive Cockeysville, MD Baltimore County Site ID 240053001			Davidsonville Recreation Center 3801 Queen Anne Bridge Road Anne Arundel County Site ID 240030014			4600 Telegraph Road Cecil County Site ID 240150003			Edgewood Chemical Biological Center Waehli Road Harford County Site ID 240251001			3560 Aldino Road Harford County Site ID 240259001			Millington Wildlife Management Area Kent County Site ID 240290002		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	2.3	2.3	2.4																		
		2nd Maximum	2.3	2.1	2.2																		
		# of Exceedences	0	0	0																		
	8-Hour	Maximum	1.7	1.6	1.6																		
		2nd Maximum	1.6	1.6	1.4																		
		# of Exceedences	0	0	0																		
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour																					
		Second Maximum																					
		# of Exceedences																					
	$PM_{2.5}$	Maximum 24-Hour	26.7	28.2	35.2	28.6	29.5	26.5				37.2	26	NA	25	27.9	NA				38	30.6	NA
		Mean Annual	10.7	10.7	9.5	9.7	8.9	8.5				10.9	9.3	NA	10.3	11.1	NA				10.9	10.7	NA
		# of Exceedences	0	0	0	0	0	0				0	0	NA	0	0	NA				0	0	NA
Ozone (O_3) [ppm]	8-Hour	First Highest	0.101	0.109	0.072	0.092	0.098	0.076	0.094	0.102	0.076	0.096	0.094	NA	0.114	0.106	0.08	0.098	0.106	0.075	0.1	0.101	0.078
		Second Highest	0.091	0.09	0.068	0.088	0.083	0.074	0.092	0.099	0.076	0.094	0.088	NA	0.107	0.095	0.078	0.09	0.086	0.068	0.092	0.096	0.071
		Third Highest	0.087	0.083	0.068	3.086	0.082	0.071	0.088	0.094	0.071	0.092	0.087	NA	0.106	0.089	0.073	0.088	0.086	0.068	0.091	0.09	0.069
		Fourth Highest	0.085	0.083	0.067	0.086	0.082	0.068	0.087	0.087	0.071	0.089	0.087	NA	0.098	0.086	0.072	0.085	0.083	0.068	0.084	0.089	0.067
		# of Days Standard Exceeded	12	7	0	9	12	1	11	13	1	8	13	NA	17	9	2	13	11	0	11	16	1
Nitrogen Dioxode (NO_2) [100 ppb]		1-Hour Maximum	55	47	54																		
		1-Hour Second Maximum	51	46	53																		
		# of Days Standard Exceeded	0	0	0																		
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	53	26	31																		
		24-Hour Maximum	11	6	5																		
Lead (Pb) [ug/m3]		1st Maximum																					
		2nd Maximum																					
		3rd Maximum																					
		4th Maximum																					

NA Not available

			Lathrop E. Smith Environmental Education Center Montgomery County Site ID 240313001			Pg County Equestrian Center 14900 Pennsylvania Avenue Prince George's County Site ID 240338003			Howard University 12003 Old Baltimore Pike Prince George's County Site ID 240330030			**Furley E.S. Recreational Center 4633 Furley Avenue Baltimore City Site ID 24510054**			**Oldtown Fire Station 1100 Hillen Street Baltimore City Balitmore County Site ID 24510040**			**Public Works Building 7409 Baltimore Annapolis Boulevard Anne Arundel County Site ID 240031003**			**BaltImore City FD 205714 Eastern Avenue Balitmore County Site ID 2451000008**		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum							1.7	1.3	1				2.3	2.5	2.4						
		2nd Maximum							1.3	1.2	0.9				2.2	2.5	2						
		# of Exceedences							0	0	0				0	0	0						
	8-Hour	Maximum							1.1	1.2	0.9				1.8	2.1	1.6						
		2nd Maximum							0.8	0.9	0.9				1.5	1.6	1.3						
		# of Exceedences							0	0	0				0	0	0						
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour							27	32	26							34	29		39	33	35
		Second Maximum							25	32	25							24	26		37	31	31
		# of Exceedences							0	0	0							0	0		0	0	0
	$PM_{2.5}$	Maximum 24-Hour	31.8	33.1	NA	28.8	24.7	23.5	24.3	25	22.2				36	29.7	34.6	26.4	30.1	NA	28.2	23.7	32
		Mean Annual	10.9	10.3	NA	8.9	7.8	7.5	8.2	8.5	7.8				10.8	12	9.1	10.7	10.2	NA	10.6	9.6	9.4
		# of Exceedences	0	0	NA	0	0	0	0	0	0				0	0	0	0	0	NA	0	0	0
Ozone (O_3) [ppm]	8-Hour	First Highest	0.088	0.087	0.072	0.095	0.104	0.072	0.094	0.091	0.074	0.087	0.087	0.069									
		Second Highest	0.085	0.077	0.07	0.092	0.091	0.07	0.091	0.085	0.072	0.084	0.082	0.065									
		Third Highest	0.082	0.074	0.069	0.089	0.09	0.069	0.088	0.08	0.071	0.083	0.081	0.064									
		Fourth Highest	0.081	0.073	0.069	0.086	0.09	0.069	0.083	0.079	0.068	0.082	0.071	0.063									
		# of Days Standard Exceeded	5	2	0	14	14	0	7	9	0	7	3	0									
Nitrogen Dioxode (NO_2) [100 ppb]		1-Hour Maximum								44	48				58	63	60						
		1-Hour Second Maximum								41	43				57	60	57						
		# of Days Standard Exceeded								0	0				0	0	0						
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum							14	16	12												
		24-Hour Maximum							5	3	3												
Lead (Pb) [ug/m3]		1st Maximum								0.044	0.011												
		2nd Maximum								0.007	0.007												
		3rd Maximum								0.006	0.005												
		4th Maximum								0.006	0.004												

NA Not available

			Route 9 Delaware City New Castle County Site ID 100031008			MLK Boulvard and Justison Street New Castle County Site ID 100032004			Lums Pond Park New Castle County Site ID 100031007			Brandywine Creek State Park New Castle County Site ID 100031010			Bellevue State Park New Castle County Site ID 100032004		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	1.6	1.2	2.2	1.7	2.1	1.7									
		2nd Maximum	1.1	1.2	1.9	1.7	2.1	1.6									
		# of Exceedences	0	0	0	0	0	0									
	8-Hour	Maximum	0.8	1.1	1	1.5	1.8	1.3									
		2nd Maximum	0.7	0.8	0.9	1.1	1.3	1.1									
		# of Exceedences	0	0	0	0	0	0									
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour															
		Mean Annual															
		# of Exceedences															
	$PM_{2.5}$	Maximum 24-Hour				32	30.6	36.6	27	23.8	24.7						
		Mean Annual				10.3	10.3	9.5	8.8	8.5	7.8						
		# of Exceedences				0	0	0	0	0	0						
Ozone (O_3) [ppm]	8-Hour	First Highest				0.082	0.086	0.073	0.082	0.086	0.066	0.086	0.082	0.077	0.1	0.08	0.072
		Second Highest				0.08	0.085	0.07	0.079	0.082	0.065	0.082	0.08	0.072	0.097	0.08	0.07
		Third Highest				0.079	0.08	0.068	0.078	0.082	0.063	0.082	0.079	0.066	0.093	0.079	0.068
		Fourth Highest				0.078	0.08	0.067	0.078	0.082	0.062	0.078	0.078	0.065	0.083	0.078	0.067
		# of Days Standard Exceeded				5	12	0	7	7	0	6	7	1	9	8	0
Nitrogen Dioxide (NO_2) [ppm]		1-Hour Maximum				53	71	53						34			
		1-Hour Second Maximum				47	60	48						34			
		# of Days Standard Exceeded				0	0	0						0			
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	17	36	35	28	11	23	13		8				33	12	8
		24-Hour Maximum	5	9	14	6	4	4	7		2				15	4	4
Lead (Pb) [ug/m^3]	24-Hour	First Highest				NA	0.016	0.006									
		Second Highest				NA	0.007	0.006									
		Third Highest				NA	0.006	0.006									
		Fourth Highest				NA	0.006	0.005									

			Castor and Delaware Avenues Philadelphia County Site ID 421010449			Rockview Lane Bucks County Site ID 420170012			1501 E Lycoming Avene Ams Lab Philadelphia County Site ID 42101004			5200 Pennypack Park Philadelphia County Site ID 421011002			Front St & Norris St Delaware County Site ID 420450002		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum				2.4	2.1	2.5	2.6	2.7	2.4	2.2	2.7	1.6			
		2nd Maximum				2.1	1.9	2.4	2.5	2.3	2.3	2.1	2.3	1.6			
		# of Exceedences				0	0	0	0	0	0	0	0	0			
	8-Hour	Maximum				1.8	1.3	1.9	2.2	1.9	1.7	1.2	1.6	1.5			
		2nd Maximum				1.8	1.2	1.8	1.7	1.5	1.7	1.2	1.5	1.3			
		# of Exceedences				0	0	0	0	0	0	0	0	0			
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour	59	61	36				46	67	29				57	39	63
		Second Maximum	53	44	36				44	39	24				45	39	61
		# of Exceedences	0	0	0				0	0	0				0	0	0
	$PM_{2.5}$	Maximum 24-Hour				49.6	36	43.2	25.3	21.1	39.1	29.7	29	32.1	27.4	23.5	30.9
		Mean Annual				11.7	10.9	10.9	8.9	9.7	9.2	9.9	8.8	9.4	9.8	10.8	10.7
		# of Exceedences				0	0	0	0	0	0	0	0	0	0	0	0
Ozone (O_3) [ppm]	8-Hour	First Highest				0.085	0.09	0.077	0.072	0.067	0.058	0.091	0.087	0.076	0.086	0.087	0.074
		Second Highest				0.082	0.084	0.077	0.071	0.065	0.052	0.089	0.087	0.072	0.084	0.082	0.074
		Third Highest				0.081	0.082	0.076	0.07	0.065	0.047	0.089	0.084	0.071	0.084	0.081	0.074
		Fourth Highest				0.081	0.082	0.073	0.07	0.065	0.047	0.088	0.083	0.071	0.079	0.081	0.069
		# of Days Standard Exceeded				6	0	3	0	0	0	11	0	1	6	12	1
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum				50	42	47	88	64	59				54	56	69
		1-Hour Second Maximum				50	41	36	84	62	56				51	50	56
		# of Days Standard Exceeded				0	0	0	0	0	0				0	0	0
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum				30	18	18	14	16	9	8	9	8	21	29	16
		24-Hour Maximum				12	9	9	9	5	5	5	5	4	10	10	10
Lead (Pb) [ug/m3]		1st Maximum										0.065	0.157	0.152	0.012	0.011	0.01
		2nd Maximum										0.058	0.113	0.092	0.012	0.011	0.01
		3rd Maximum										0.052	0.1	0.069	0.012	0.011	0.01
		4th Maximum										0.045	0.097	0.066	0.012	0.011	0.01

NA Not available

			360 Clinton Avenue Essex County Site ID 340130003			2828 Kennedy Boulevard Hudson County Site ID 340171002			7 Broad Street Union County Site ID 340390003			Consolidated Firehouse 355 Newark Avenue Hudson County Site ID 340171003			Interchange 13 New Jersey Turnkpike Union County Site ID 340390004			Athletic Fields Route 206 South Mercer County Site ID 340210005			Horticultural Farm #3 off Ryder's Lane Middlesex County Site ID 340230011		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	4	2.8	5.2	5.7	3.6	2.8	3.3	3.2	2.4				2.7	2.1	2.3						
		2nd Maximum	3.4	2.6	3.1	4	3.2	2.7	3.2	3.1	2.4				2.5	2.1	2.2						
		# of Exceedences	0	0	0	0	0	0	0	0	0				0	0	0						
	8-Hour	Maximum	2.8	1.7	2.1	3	3.1	2.2	2.8	1.9	2.2				2.1	1.6	1.7						
		2nd Maximum	2.8	1.7	1.9	1.8	2.5	1.8	2.2	1.8	1.7				1.7	1.4	1.4						
		# of Exceedences	0	0	0	0	0	0	0	0	0				0	0	0						
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour										63	82	53									
		Second Maximum										63	73	43									
		# of Exceedences										0	0	0									
	$PM_{2.5}$	Maximum 24-Hour	27.7	23.5	27.6							40.8	30.8	30.6	42.4	33.8	38						
		Mean Annual	10.5	9	8.7							10.8	9.9	10	12.2	10.7	10.7						
		# of Exceedences	0	0	0							0	0	0	0	0	0						
Ozone (O_3) [ppm]	8-Hour	First Highest	0.091	0.082	0.078													0.089	0.082	0.075	0.092	0.083	0.074
		Second Highest	0.091	0.082	0.075													0.088	0.081	0.072	0.092	0.083	0.07
		Third Highest	0.084	0.081	0.07													0.086	0.081	0.071	0.09	0.082	0.07
		Fourth Highest	0.081	0.08	0.069													0.079	0.08	0.07	0.087	0.082	0.07
		# of Days Standard Exceeded	8	7	1													7	11	0	11	11	0
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum	100	66	80										100	96	82	60	58	NA	60	58	44
		1-Hour Second Maximum	88	65	73										97	80	79	50	49	NA	50	49	44
		# of Days Standard Exceeded	0	0	0										0	0	0	0	0	NA	0	0	0
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	23	17	10	25	16	9	19	22	12				52	53	22						
		24-Hour Maximum	9	8	4	12	6	5	6	5	4				12	9	7						
Lead (Pb) [ug/m3]		1st Maximum		0.011	0.011																		
		2nd Maximum		0.09	0.011																		
		3rd Maximum		0.08	0.01																		
		4th Maximum		0.07	0.007																		

NA Not available

			200th Street and Southern Bouelvard Pfizer Lab Bronx County Site ID 360050133			160 Convent Avenue New York County Site ID 360610135			Queens College 65-30 Kissena Boulevard Queens County Site ID 360810124			Dawn Drive Suffolk County Site ID 361030024			52 681 Kelly Street Bronx County Site ID 360050110			NYSDEC Field Headquarters Gypsy Trail Road Putnam County Site ID 36079005			3059 Sound Avenue Suffolk County Site ID 361030004			White Plains Pump Station 240 Orchard Street Westchester County Site ID 361192004			JHS 126 424 Leonard Street Kings County Site ID 360470122			Lawrence High School Nassau County Site ID 360590008		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	3.2	2.4	2.1	3.1	3.2	1.8	2.1	1.7	2																								
		2nd Maximum	3	2.1	2	2.7	2.2	1.8	1.9	1.6	1.8																								
		# of Exceedences	0	0	0	0	0	0	0	0	0																								
	8-Hour	Maximum	2.8	1.6	1.5	2	1.3	1.5	1.8	1.1	1.4																								
		2nd Maximum	2.3	1.5	1.3	1.6	1.3	1.2	1.4	1.1	1																								
		# of Exceedences	0	0	0	0	0	0	0	0	0																								
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour																																	
		Second Maximum																																	
		# of Exceedences																																	
	$PM_{2.5}$	Maximum 24-Hour	27.3	31.9	28.7				34.9	29.8	30				NA	25	29.7										25.7	27.5	32.1	28.7	NA	NA			
		Mean Annual	10	9.5	9.1				9.3	8.5	8.4				NA	13.9	9										10.3	9.5	9.3	8.9	NA	NA			
		# of Exceedences	0	0	0				0	0	0				NA	0	0										0	0	0	0	NA	NA			
Ozone (O_3) [ppm]	8-Hour	First Highest	0.09	0.08	0.076	0.089	0.077	0.073	0.096	0.083	0.08				NA	0.078	0.074	0.081	0.076	0.073	0.089	0.091	0.086	0.098	0.086	0.081									
		Second Highest	0.079	0.078	0.072	0.083	0.076	0.069	0.094	0.082	0.079				NA	0.07	0.073	0.075	0.075	0.068	0.087	0.088	0.084	0.086	0.08	0.079									
		Third Highest	0.079	0.077	0.07	0.081	0.075	0.063	0.089	0.082	0.072				NA	0.069	0.072	0.072	0.072	0.067	0.082	0.084	0.086	0.076	0.08	0.075									
		Fourth Highest	0.079	0.076	0.068	0.08	0.074	0.062	0.084	0.082	0.071				NA	0.068	0.071	0.068	0.069	0.067	0.08	0.083	0.078	0.076	0.079	0.072									
		# of Days Standard Exceeded	5	4	1	7	2	0	6	8	2				NA	1	0	1	1	0	6	6	6	4	4	2									
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum	69	68	73				79	64	81				NA	60	86																		
		1-Hour Second Maximum	69	68	73				72	63	63				NA	58	73																		
		# of Days Standard Exceeded	0	0	0				0	0	0				NA	0	0																		
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	49	33	25				40	64	19				NA	23	32	15	26	10															
		24-Hour Maximum	26	13	11				16	9	7				NA	7	9	6	3	3															
Lead (Pb) [ug/m3]		1st Maximum										0.096	0.149	0.05																				
		2nd Maximum										0.088	0.089	0.045																				
		3rd Maximum										0.06	0.079	0.03																				
		4th Maximum										0.048	0.044	0.026																				

NA Not available

			Roosevelt School Park Avenue Fairfield County Site ID 090010010			Sherwood Island State Park Fairfield County Site ID 090019003			Courthouse 155 Morgan Street Hartford County Site ID 090030017			Remington Road Hartford County Site ID 090031003			1 James Street New Haven County Site ID 090090027			141 Smith Street New London County Site ID 090110124			Route 190 Shenipsit State Forest Tolland County Site ID 090131001			80 Ayers Road Windham County Site ID 09015991		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	3.4	2.7	3.6	1.4	1	0.8	3.8	13.2	2.7	2.4	1.4	2.2	2.1	1.6	2.3									
		2nd Maximum	2.8	2.6	3.2	1.4	0.9	0.8	3.5	7.8	2.6	2	1.3	1.8	2	1.5	2									
		# of Exceedences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
	8-Hour	Maximum	2.2	1.9	1.9	1.3	0.8	0.7	2.4	4	1.9	1.8	1	1.3	1.6	1.3	1.6									
		2nd Maximum	2	1.6	1.8	1	0.8	0.7	2.2	2.5	1.7	1.3	1	1.2	1.5	1.2	1.4									
		# of Exceedences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour	33	54	45							24	23	28	55	39	34									
		Second Maximum	31	34	36							24	22	26	50	37	34									
		# of Exceedences	0	0	0							0	0	0	0	0	0									
	$PM_{2.5}$	Maximum 24-Hour	28.9	27.6	31.6	57.5	20.6	25.3				41	21.2	35.1	45.1	23	35.1									
		Mean Annual	10	9.3	8.7	9.5	8	7.7				8.9	7.3	7.7	10.1	8.3	8.8									
		# of Exceedences	0	0	0	0	0	0				0	0	0	0	0	0									
Ozone (O_3) [ppm]	8-Hour	First Highest				0.101	0.093	0.099				0.092	0.091	0.086	0.098	0.096	0.084	0.088	0.104	0.091	0.087	0.096	0.084	0.082	0.084	0.076
		Second Highest				0.092	0.092	0.095				0.081	0.079	0.078	0.085	0.09	0.077	0.085	0.092	0.09	0.072	0.086	0.083	75	0.083	0.072
		Third Highest				0.087	0.091	0.087				0.08	0.077	0.077	0.083	0.089	0.077	0.083	0.091	0.086	0.072	0.085	0.082	0.071	0.075	0.072
		Fourth Highest				0.087	0.089	0.086				0.072	0.077	0.077	0.08	0.081	0.075	0.082	0.087	0.085	0.068	0.083	0.081	0.07	0.075	0.069
		# of Days Standard Exceeded				9	14	12				3	6	4	6	13	3	9	8	6	1	8	5	1	2	1
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum				64	41	51				64	39	53	71	51	76									
		1-Hour Second Maximum				55	41	50				62	38	48	71	51	65									
		# of Days Standard Exceeded				0	0	0				0	0	0	0	0	0									
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum				28	13	14				18	9	11	104	48	26									
		24-Hour Maximum				17	6	6				10	4	4	21	14	8									
4																										
Lead (Pb) [ug/m3]		1st Maximum													0.024	0.035	0.256									
		2nd Maximum													0.015	0.03	0.109									
		3rd Maximum													0.014	0.028	0.092									
		4th Maximum													0.009	0.013	0.076									

NA Not available

			Francis School 64 Bourne Avenue Providence County Site ID 440071010			Rockefeller Library Prospect Street Providence County Site ID 440070012			W. Alton Jones Campus Kent County Site ID 440030002			Tarzwell Road Washington County Site ID 440090007			212 Prairie Avenue Providence County Site ID 44070022		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	1.8	1.6	2.2												
		2nd Maximum	1.8	1.5	2												
		# of Exceedences	0	0	0												
	8-Hour	Maximum	1.4	1.3	1.3												
		2nd Maximum	1.3	1	1.3												
		# of Exceedences	0	0	0												
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour							24	22	18				25	30	28
		Second Maximum							23	20	17				25	29	27
		# of Exceedences							0	0	0				0	0	0
	$PM_{2.5}$	Maximum 24-Hour	43.3	25.4	31.6				18.7	16.3	16.8				38.2	23.2	28.5
		Mean Annual	8.7	7.6	7.6				6.3	6.7	6.3				8.7	7.2	7.3
		# of Exceedences	0	0	0				0	0	0				0	0	0
Ozone (O_3) [ppm]	8-Hour	First Highest	0.078	0.092	0.085				0.084	0.082	0.083	0.084	0.097	0.093			
		Second Highest	0.078	0.084	0.08				0.081	0.078	0.081	0.084	0.086	0.082			
		Third Highest	0.076	0.08	0.078				0.079	0.075	0.073	0.083	0.084	0.08			
		Fourth Highest	0.073	0.079	0.076				0.078	0.072	0.073	0.074	0.082	0.079			
		# of Days Standard Exceeded	3	8	5				4	2	2	3	7	4			
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum	31	40	55	63	48	58			17						
		1-Hour Second Maximum	30	34	45	52	44	58			9						
		# of Days Standard Exceeded	0	0	0	0	0	0			0						
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	30	26	17	24	30	10									
		24-Hour Maximum	12	8	6	12	10	5									
Lead (Pb) [ug/m3]		1st Maximum	0.011	0.013	0.016												
		2nd Maximum	0.011	0.012	0.013												
		3rd Maximum	0.009	0.012	0.013												
		4th Maximum	0.008	0.012	0.012												

NA Not available

			Kenmore Square Suffolk County Site ID 250250002			Harrison Avenue Suffolk County Site ID 250250042			695 Hillside Street Norfolk County Site ID 250213003			60 Sconticut Road Bristol County Site ID 250051002			One City Square Suffolk County Site ID 25020027			659 Globe Street Bristol County Site ID 250051004		
			2011	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*	*2011*	*2012*	*2013*
Carbon Monoxide (CO) [ppm]	1-Hour	Maximum	1.5	1.4	1.5	2.4	2.2	2												
		2nd Maximum	1.5	1.3	1.3	2.1	1.1	1.8												
		# of Exceedences	0	0	0	0	0	0												
	8-Hour	Maximum	1.3	1.1	1	1.9	1.9	1.3												
		2nd Maximum	1.2	0.9	0.9	1.4	1.6	1.1												
		# of Exceedences	0	0	0	0	0	0												
Particulate Matter [ug/m^3]	PM_{10}	Maximum 24-Hour	38	37	68	37	25	31							39	41	40			
		Second Maximum	38	28	50	35	25	25							34	37	40			
		# of Exceedences	0	0	0	0	0	0							0	0	0			
	$PM_{2.5}$	Maximum 24-Hour	23.7	23	18.2	22.3	23.2	18.6							22.6	24.7	19.4	20.5	20.8	19.7
		Mean Annual	9.4	9	8	8.5	8.3	7.4							8.6	8.8	7.8	7.9	7.1	6.9
		# of Exceedences	0	0	0	0	0	0							0	0	0	0	0	0
Ozone (O_3) [ppm]	8-Hour	First Highest				0.07	0.08	0.071	0.076	0.08	0.075	0.085	0.059	NA				NA	0.09	0.09
		Second Highest				0.062	0.064	0.061	0.075	0.078	0.074	0.081	0.058	NA				NA	0.082	0.08
		Third Highest				0.061	0.064	0.06	0.073	0.075	0.072	0.08	0.056	NA				NA	0.08	0.079
		Fourth Highest				0.06	0.062	0.059	0.073	0.074	0.071	0.076	0.056	NA				NA	0.078	0.078
		# of Days Standard Exceeded				0	1	0	1	2	0	4	0	NA				NA	6	4
Nitrogen Dioxide (NO_2) [100 ppb]		1-Hour Maximum	75	61	56	74	67	57	42	30	33									
		1-Hour Second Maximum	72	49	54	69	52	57	35	25	29									
		# of Days Standard Exceeded	0	0	0	0	0	0	0	0	0									
Sulfur Dioxide (SO_2) [ppm]		1-Hour Maximum	49	86	30	36	21	15										93	86	137
		24-Hour Maximum	12	6	7	13	8	5										35	24	16
Lead (Pb) [ug/m3]		1st Maximum				0.017	0.013	0.007												
		2nd Maximum				0.015	0.012	0.007												
		3rd Maximum				0.001	0.009	0.007												
		4th Maximum				0.001	0.008	0.007												

NA Not available