

# Transportation Conformity Demonstration:

*Connections 2050* Long-Range Plan,  
and FY2025 TIP for Pennsylvania



July 2024



### The Delaware Valley Regional Planning

**Commission (DVRPC)** is the federally designated Metropolitan Planning Organization for the Greater Philadelphia region, established by an Interstate Compact between the Commonwealth of Pennsylvania and the State of New Jersey. Members include Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, plus the City of Chester, in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties, plus the cities of Camden and Trenton, in New Jersey.

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## Glossary of Acronyms and Terms

<b>AQ</b>	Air Quality	<b>Nonattainment Area</b>	Area currently not meeting the NAAQS
<b>CAA</b>	Clean Air Act (as amended)	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CFR</b>	Code of Federal Regulations	<b>NRS</b>	Not Regionally Significant
<b>CO</b>	Carbon Monoxide	<b>PATCO</b>	Port Authority Transit Corporation
<b>DEP</b>	State Department of Environmental Protection	<b>PennDOT</b>	Pennsylvania Department of Transportation
<b>DOT</b>	State Department of Transportation	<b>Plan</b>	DVRPC's Long-Range Plan
<b>DRPA</b>	Delaware River Port Authority	<b>PM</b>	Particulate Matter
<b>DVRPC</b>	Delaware Valley Regional Planning Commission	<b>PM<sub>2.5</sub></b>	Fine Particulate Matter
<b>FHWA</b>	Federal Highway Administration	<b>PM<sub>10</sub></b>	Coarse Particulate Matter
<b>Final Rule</b>	Current conformity guidance under CAA	<b>ppm</b>	Parts per Million
<b>FR</b>	<i>Federal Register</i>	<b>SIP</b>	State Implementation Plan
<b>FTA</b>	Federal Transit Administration	<b>SEPTA</b>	Southeastern Transportation Authority
<b>FY</b>	Fiscal Year	<b>SO<sub>x</sub></b>	Sulfur Oxides
<b>Maintenance Area</b>	Area that previously did not meet NAAQS	<b>TAZ</b>	Traffic Analysis Zone
<b>MOVES</b>	Motor Vehicle Emissions Simulator: the most recent emissions estimation model approved by the U.S. EPA	<b>TCICG</b>	Transportation Conformity Interagency Consultation Group
<b>MPO</b>	Metropolitan Planning Organization	<b>TCM</b>	Transportation Control Measure
<b>MVEB</b>	Motor Vehicle Emissions Budget	<b>TDM</b>	Travel Demand Model
<b>NAAQS</b>	National Ambient Air Quality Standards	<b>TIP</b>	Transportation Improvement Program
<b>NH<sub>3</sub></b>	Ammonia	<b>U.S.C.</b>	U.S. Code
<b>NJT</b>	New Jersey Transit	<b>U.S. EPA</b>	U.S. Environmental Protection Agency
		<b>VMT</b>	Vehicle Miles Traveled
		<b>VOCs</b>	Volatile Organic Compounds



# Executive Summary

## Where is Transportation Conformity required?

### Nonattainment

**Areas:** a region that currently does not meet the NAAQS.

**Maintenance Areas:** a region that **previously** violated air quality standards but currently meets them and has an approved Clean Air Act (CAA) section 175(a) maintenance plan.

## Overview

Transportation conformity is the process by which metropolitan planning organizations (MPOs) or departments of transportation (DOTs) demonstrate that transportation projects included in a region's Long-Range Plan (Plan) or Transportation Improvement Program (TIP) do not cause new air quality violations, worsen existing violations, or delay timely attainment of the National Ambient Air Quality Standards (NAAQS).

A transportation conformity demonstration is required at least once every four years or when an MPO: (1) adopts a new Plan or TIP; or (2) amends, adds, or deletes a regionally significant, nonexempt project in a Plan or TIP. This conformity demonstration is required due to Amendment 3 (publication #24141A) to the *Connections 2050* Long-Range Plan ('Plan') and a new Fiscal Year (FY) 2025–2028 Pennsylvania TIP. Since there have been no changes to the scope or analysis years of nonexempt and regionally significant projects in the New Jersey portion of the DVRPC region, a conformity determination is not required for the New Jersey portion of the Plan or New Jersey TIP.

The Delaware Valley Regional Planning Commission (DVRPC) region includes a complex combination of nonattainment and maintenance areas for ozone and fine particulate matter (PM<sub>2.5</sub>). The region's ozone nonattainment area encompasses the entire nine-county DVRPC region,

while the PM<sub>2.5</sub> maintenance areas encompass various portions of the region. The region is required to demonstrate transportation conformity for each of these standards in each of the appropriate geographic areas covered by the nonattainment and maintenance areas.

This Executive Summary highlights DVRPC's conformity demonstration for:

### Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO<sub>x</sub>) meeting the 1997, 2008, and 2015 Eight-Hour Ozone NAAQS requirements in:

- the Pennsylvania portion of the Philadelphia–Wilmington–Atlantic City, PA–NJ–MD–DE Ozone Nonattainment Area; and

### Direct PM<sub>2.5</sub> and precursor NO<sub>x</sub> meeting the 2006 24-Hour, and 2012 Annual PM<sub>2.5</sub> NAAQS requirements in:

- the Pennsylvania portion of the Philadelphia–Wilmington, PA–NJ–DE 24-Hour PM<sub>2.5</sub> Maintenance Area, and
- the Delaware County, PA Annual PM<sub>2.5</sub> Maintenance Area.

This summary serves as an inclusive document that demonstrates the transportation conformity of the DVRPC Plan and Pennsylvania TIP with all applicable SIPs and NAAQS requirements for the above pollutants within the noted areas. The full conformity determination document is available at [www.dvrpc.org/airquality/conformity](http://www.dvrpc.org/airquality/conformity).

## Analysis Approach

### Regional Emissions Analysis of Plan and TIP Projects

The federal Final Conformity Rule (Final Rule) requires that all regionally significant and nonexempt projects that are funded in the Plan and TIP must be included in the regional Travel Demand Model (TDM). Emissions from those modeled projects are then quantified using the latest U.S. Environmental Protection Agency (U.S. EPA)-approved emissions modeling system, in this case the Motor Vehicle Emissions Simulator version 4 (MOVES 4). DVRPC has used the MOVES 4 model for this transportation conformity demonstration.

### Conformity Test

Modeled emissions results from the projects in the Plan and TIPs are then compared to Motor Vehicle Emissions Budgets (MVEBs) contained in the SIPs to meet the NAAQS. When modeled emissions are less than the SIP budgets, the transportation conformity requirements have been met. This process is referred to as the “budget test.”

Pennsylvania has approved SIP MVEBs for the 1997 Eight-Hour Ozone Standard, 1997 and 2012 Annual  $PM_{2.5}$  standards, and 2006 24-Hour  $PM_{2.5}$  standards. These budgets are used to demonstrate conformity for all of the current NAAQS requirements.

### Analysis Years

When performing the budget test, DVRPC identifies a series of analysis years. Analysis years are benchmarks for the projects that are included in the TDM and emissions analysis. All projects that are expected to be open to traffic by the beginning of that analysis year are included in that year’s emissions analysis. The Final Rule includes guidance on the selection of analysis years. Analysis years must include SIP budget years, the final year of the Plan, and interim analysis years that are no more than 10 years apart extending out to the horizon year of the Plan.

MVEBs are established in each state’s SIP for specific years. The MVEBs set the emissions limits moving forward until the next SIP budget year. For example, the 2017  $PM_{2.5}$  SIP budgets in Pennsylvania establish emissions limits for all projects that are open to traffic after 2017 but before the new SIP budget year of 2025. The 2025  $PM_{2.5}$  SIP budgets establish emissions limits for all projects that are open to traffic after 2025 and until such time as a new SIP budget is approved by the U.S. EPA.

To demonstrate conformity for the ozone NAAQS, projected VOC and  $NO_x$  emissions in all analysis years must be below the SIP MVEBs for the given analysis years. VOCs and  $NO_x$ , which are heat-sensitive ozone precursors, are estimated for a typical summer week workday.

To demonstrate conformity for the  $PM_{2.5}$  NAAQS, emissions are estimated for direct  $PM_{2.5}$  and the  $PM_{2.5}$  precursor chemical  $NO_x$ . The SIP budgets for  $PM_{2.5}$  are expressed in terms of annual emissions; therefore, conformity analyses are conducted for annual  $PM_{2.5}$  emissions.

In the DVRPC region, the analysis years are 2025, 2035, 2045, and 2050. Delaware County has an additional SIP budget analysis year for annual  $PM_{2.5}$  and the  $PM_{2.5}$  precursor chemical  $NO_x$ , which is 2030.

For this conformity demonstration, the mobile source emissions analysis years are identified in Table 1.



**Table 1: Mobile Source Analysis Years**

Year	Ozone	PM <sub>2.5</sub>	Note
2025	√	√	Interim Year and PM <sub>2.5</sub> SIP budget year
2030		√	PM <sub>2.5</sub> SIP budget year (Delaware County only)
2035	√	√	Year within 10 years of previous analysis
2045	√	√	Year within 10 years of previous analysis
2050	√	√	DVRPC Plan horizon year

Source: DVRPC, 2024

## Findings

The DVRPC Plan and the TIPs are found to be in conformity with the current Pennsylvania SIPs under the CAA. The forecasted emissions levels of VOCs, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed the respective budgets established by the Pennsylvania Department of Environmental Protection (DEP) in accordance with the Final Rule under the current NAAQS governing applicable pollutants.

### **The transportation conformity analysis meets all applicable conformity criteria, including, but not limited to, the following:**

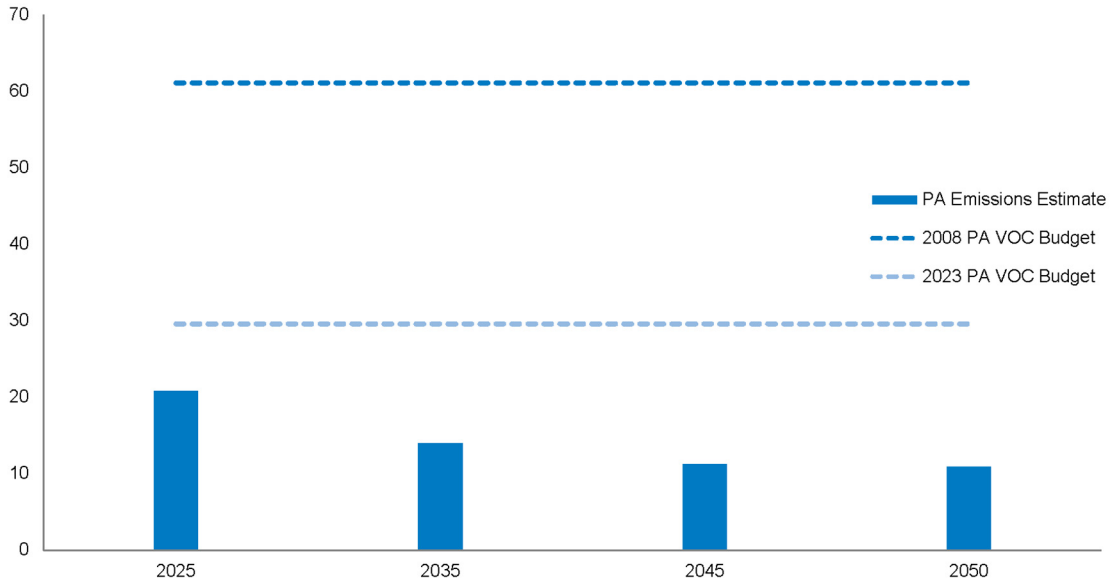
- that the Plan and the TIP are fiscally constrained [40 CFR 93.108];
- that this determination is based on the latest planning assumptions [40 CFR 93.110];
- that this determination is based on the latest emissions estimation model available [40 CFR 93.111];
- that DVRPC has made the determination according to the applicable consultation procedures [40 CFR 93.112];
- that the Plan and the TIP do not interfere with the timely implementation of transportation control measures (TCMs)<sup>1</sup> [40 CFR 93.113];
- that the Plan and the TIP are consistent with the MVEBs in the applicable SIPs [40 CFR 93.118]; and
- that each state's SIP is sovereign and there have been no changes to the scope or analysis year of nonexempt and regionally significant projects in the New Jersey portion of the region, therefore a conformity demonstration for the New Jersey portion of the region is not required.<sup>2</sup>

Figures 1 through 6 detail the emissions analysis results for transportation projects included in the Plan and TIP for Pennsylvania. The data for these figures is detailed beginning on page 25 of the full conformity document. These estimates of emissions results confirm that the transportation projects in the Plan and TIP conform to the respective SIP and Final Rule conformity requirements.

<sup>1</sup>TCMs are strategies that reduce transportation-related air pollution, greenhouse gas emissions, and fuel use by reducing vehicle miles traveled and improving roadway operations.

<sup>2</sup> [https://www3.epa.gov/ttn/naaqs/aqmguidance/collection/cp2/20120701\\_otaq\\_epa-420\\_b-12-046\\_guidance\\_multi-jurisdictional\\_transport\\_conformity.pdf](https://www3.epa.gov/ttn/naaqs/aqmguidance/collection/cp2/20120701_otaq_epa-420_b-12-046_guidance_multi-jurisdictional_transport_conformity.pdf)

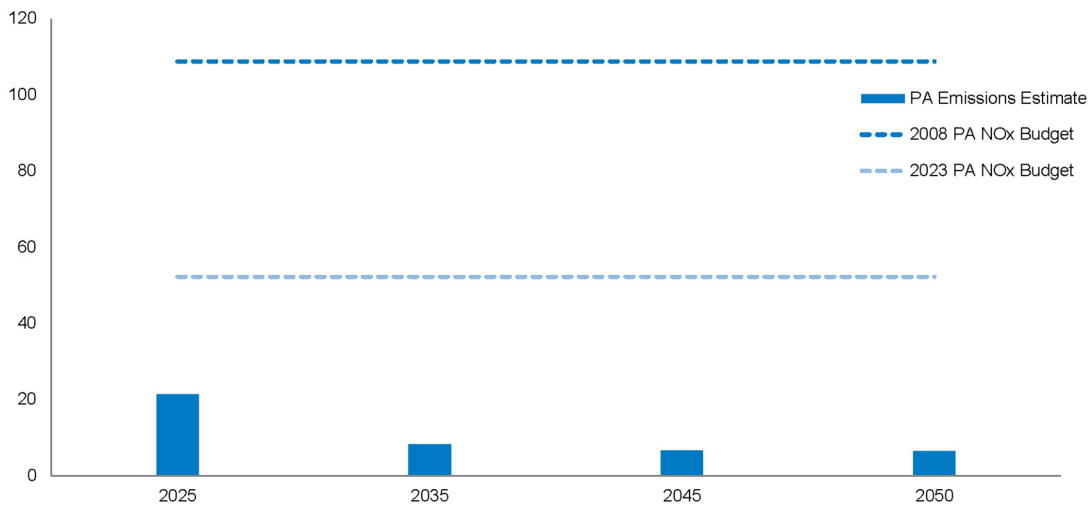
**Figure 1: VOCs Emissions Analysis Results (Tons/Day)**



Source: DVRPC, 2024

*The most recent Eight-Hour Ozone SIP MVEBs will apply to all future analysis years.*

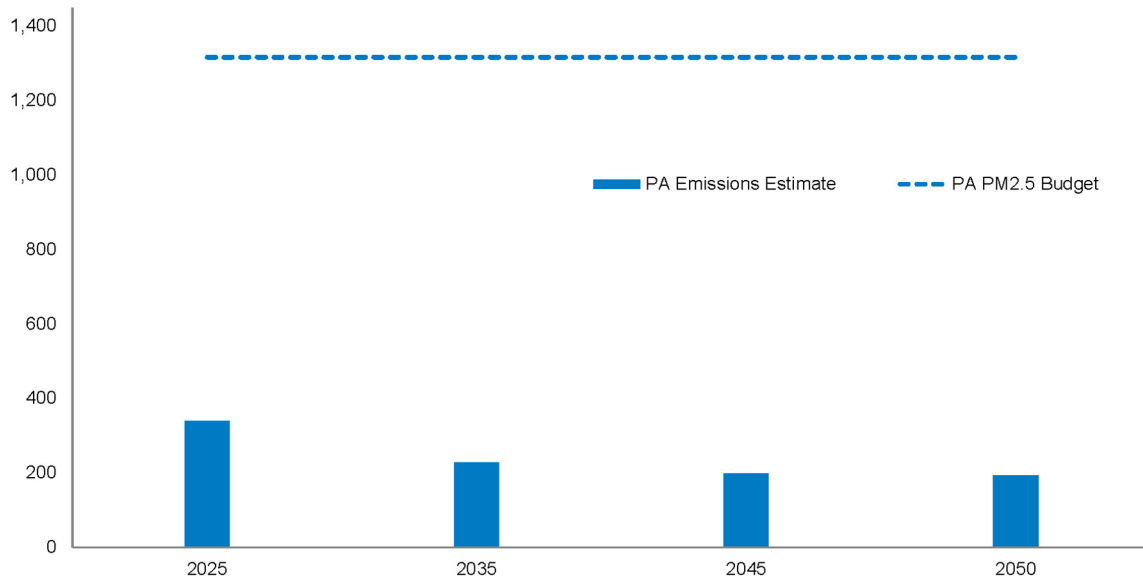
**Figure 2: NO<sub>x</sub> Emissions Analysis Results (Tons/Day)**



Source: DVRPC, 2024

*The most recent Eight-Hour Ozone SIP MVEBs will apply to all future analysis years.*

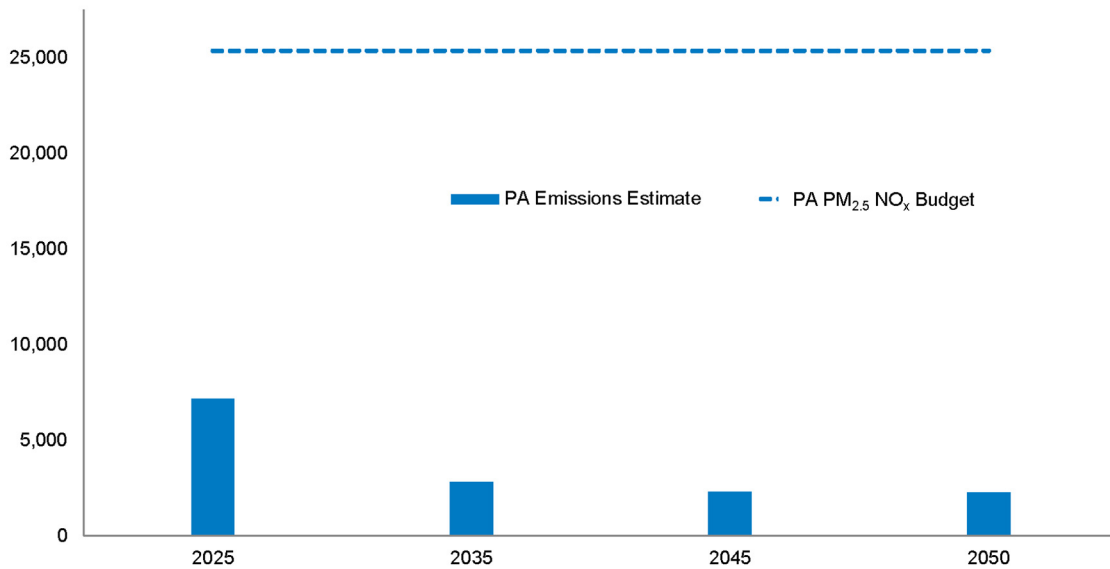
**Figure 3:** Annual and 24-Hour Direct PM<sub>2.5</sub> Emissions Analysis Results (Tons/Year)



Source: DVRPC, 2024

*The most recent MVEBs apply to all future analysis years.*

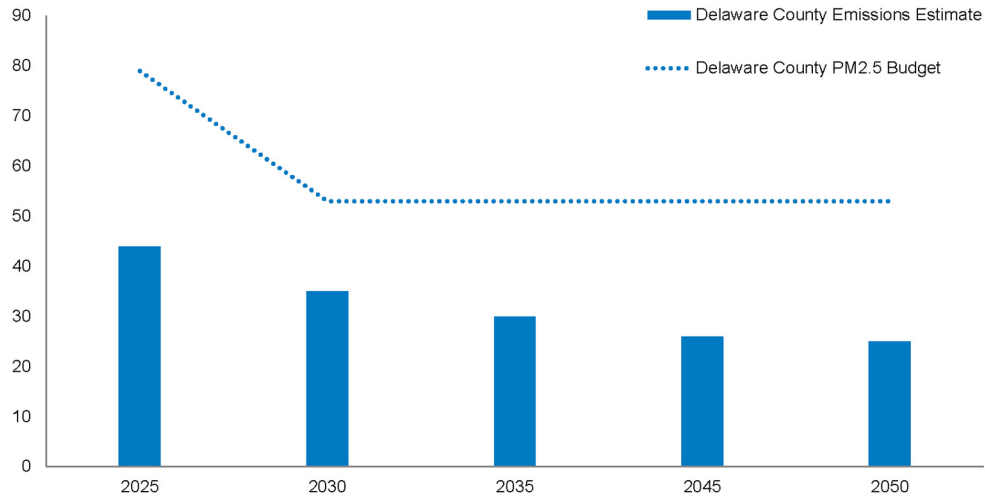
**Figure 4:** Annual and 24-Hour NO<sub>x</sub> Precursor Emissions Analysis Results (Tons/Year)



Source: DVRPC, 2024

*The most recent MVEBs apply to all future analysis years.*

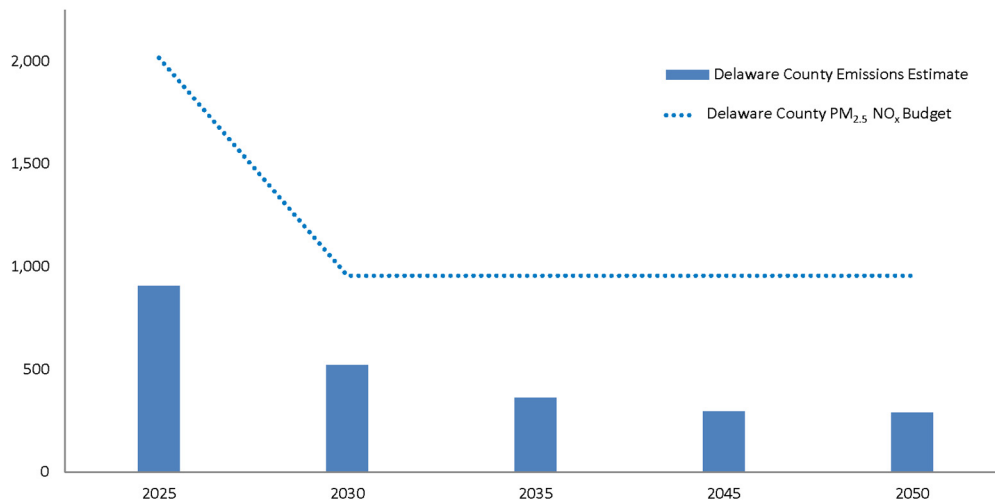
**Figure 5:** Delaware County Annual Direct PM<sub>2.5</sub> Emissions Analysis Results (Tons/Year)



Source: DVRPC, 2024

*The most recent MVEBs apply to all future analysis years.*

**Figure 6:** Delaware County Annual NO<sub>x</sub> Precursor Emissions Analysis Results (Tons/Year)



Source: DVRPC, 2024

*The most recent MVEBs apply to all future analysis years.*

These findings demonstrate transportation conformity of the DVRPC *Connections 2050* Long-Range Plan and FY2025 TIP for Pennsylvania with the state SIPs and the Final Rule requirements under CAA, including:

- the 1997, 2008, and 2015 Eight-Hour Ozone NAAQS in the Philadelphia–Wilmington–Atlantic City, PA–NJ–MD–DE Ozone Nonattainment Area;
- the 2006 24-Hour PM<sub>2.5</sub> NAAQS in the Philadelphia–Wilmington, PA–NJ–DE PM<sub>2.5</sub> Maintenance Area; and
- the 2012 Annual PM<sub>2.5</sub> Delaware County, PA Maintenance Area.



## CHAPTER 1: Introduction

### Overview

This report demonstrates that DVRPC's *Connections 2050* Long-Range Plan and FY2025 TIP for Pennsylvania conform with the Pennsylvania SIP and applicable NAAQS requirements under the CAA, as amended.

Specifically, transportation conformity is demonstrated for the following NAAQS and designation areas:

#### **VOCs and NO<sub>x</sub> meeting the 1997, 2008, and 2015 Eight-Hour Ozone NAAQS requirements in:**

- the Pennsylvania portion of the Philadelphia–Wilmington–Atlantic City, PA–NJ–MD–DE Ozone Nonattainment Area; and

#### **Direct PM<sub>2.5</sub> and precursor NO<sub>x</sub> meeting the 2006 24-Hour and 2012 Annual PM<sub>2.5</sub> NAAQS requirements in:**

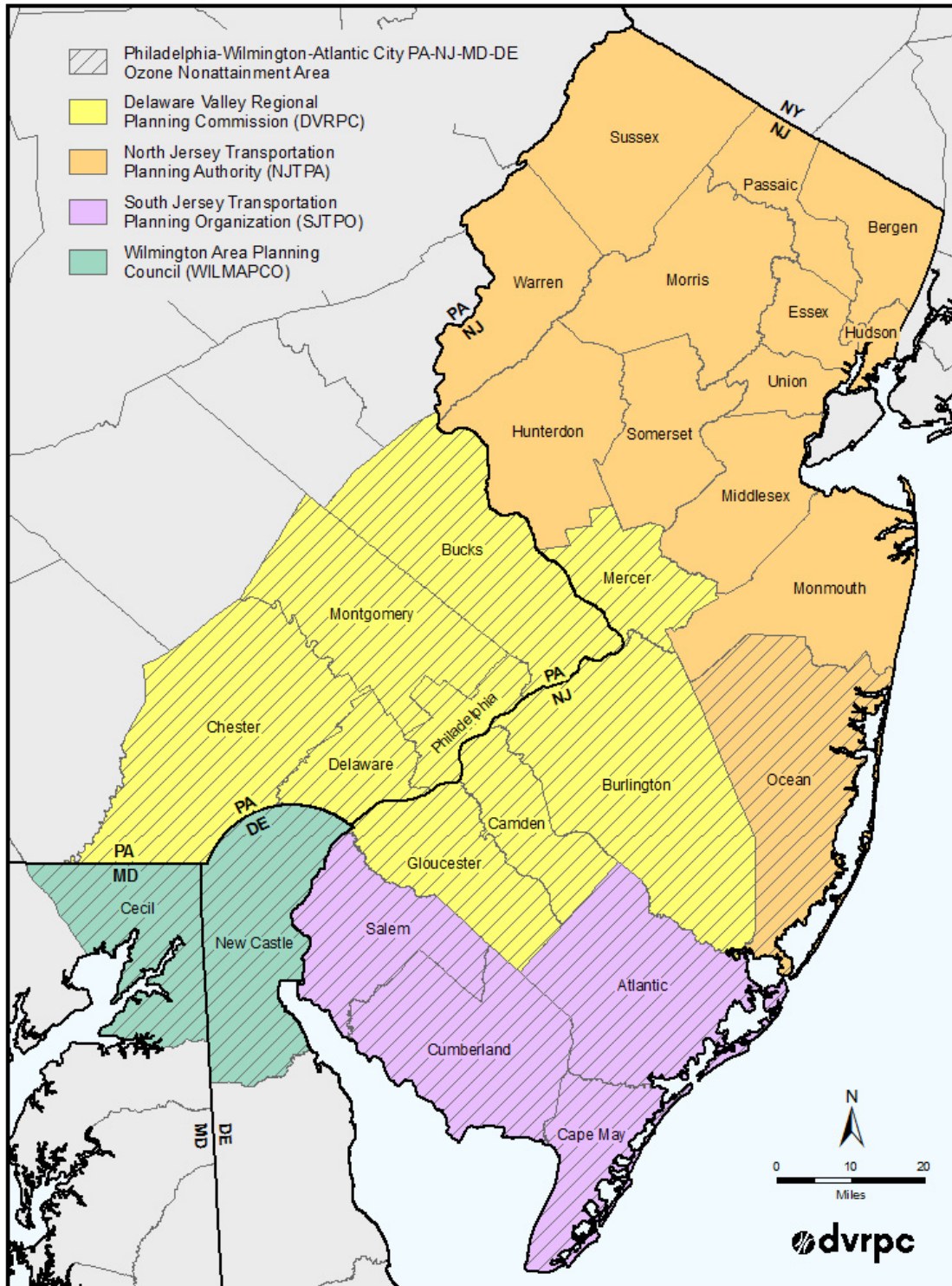
- the Pennsylvania portion of the Philadelphia–Wilmington, PA–NJ–DE 24-Hour PM<sub>2.5</sub> Maintenance Area, and
- the Delaware County, PA Annual PM<sub>2.5</sub> Maintenance Area.

In July 2013, the U.S. EPA revoked the 1997 Ozone Standard with the publication of the Implementation Rule for the 2008 Ozone Standard. In February 2018, the District of Columbia Court of Appeals ruled in the case of *South Coast Air Quality Management District v. EPA* that the implementation of this revocation of the standard violated the CAA. Subsequent court rulings and U.S. EPA guidance declared that states with SIP budgets whose 1997 Ozone Nonattainment Areas are contained within the 2008 Ozone Nonattainment Areas meet the 1997 conformity requirements by demonstrating conformity to the 2008 standard.

On August 24, 2016, the U.S. EPA revoked the 1997 Annual PM<sub>2.5</sub> Standard. The DVRPC region was in maintenance of this standard and DVRPC is not required to demonstrate conformity to this standard due to this action.

Figures 7 and 8 detail the current ozone and PM<sub>2.5</sub> nonattainment and maintenance areas that are relevant to the DVRPC region.

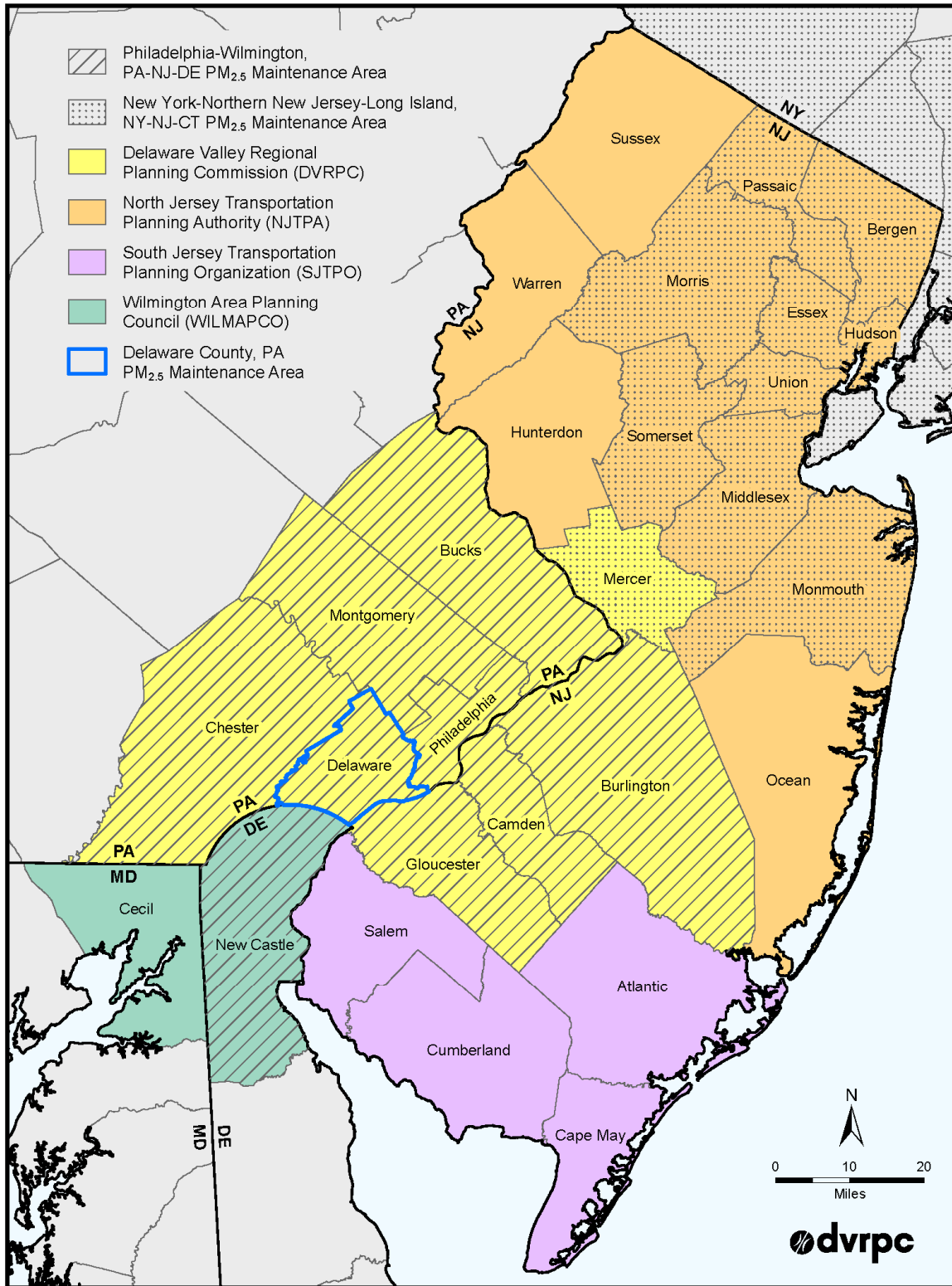
**Figure 7: Philadelphia–Wilmington–Atlantic City PA–NJ–MD–DE Eight-Hour Ozone Nonattainment Area**



Source: DVRPC, 2024



**Figure 8: DVRPC Annual and 24-Hour PM<sub>2.5</sub> Maintenance Areas**



Source: DVRPC, 2024

## NAAQS

The CAA, first enacted in 1963 and last amended in 1990, requires that the U.S. EPA set national air quality standards for air pollutants that are considered harmful to public health and the environment. The CAA also requires the agency to periodically review the standards and to update those standards as necessary to provide an ample margin of safety to protect public health and welfare.

The U.S. EPA has set NAAQS for several principal air pollutants, referred to as criteria pollutants. The NAAQS criteria pollutants include ozone, carbon monoxide, coarse and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively), sulfur dioxide, nitrogen dioxide, and lead.

The DVRPC region must demonstrate transportation conformity for ozone and PM<sub>2.5</sub>. Table 2 lists the current NAAQS for ozone and PM<sub>2.5</sub> and the date of adoption by the U.S. EPA. In May 2024, the U.S. EPA finalized the update to the annual PM<sub>2.5</sub> standard. Nonattainment designations for this standard are pending and DVRPC will continue to demonstrate conformity to the 2006 and 2012 standards as required.

**Table 2:** Current NAAQS

NAAQS	Standard	Date Adopted	Final NAA Designations	FR Notice
Ozone (2015)	70 ppb	October 2015	June 2018	80 FR 65292
Annual PM <sub>2.5</sub> (2012)	12 µg/m <sup>3</sup>	December 2012	April 2015	78 FR 3086
Annual PM <sub>2.5</sub> (2024)	9 µg/m <sup>3</sup>	May 2024	Pending	89 FR 16202
24-Hour PM <sub>2.5</sub> (2006)	35 µg/m <sup>3</sup>	October 2006	December 2009	71 FR 61144

Source: U.S. EPA, 2024

Note: NAA = Nonattainment Area; FR = Federal Register.

When a region is designated as a nonattainment area by the U.S. EPA, states are required to develop SIPs that outline how the state plans to meet or “attain” the NAAQS. Implemented SIPs contain an MVEB. Regional emissions estimates are compared against these budgets to determine progress toward meeting air quality goals.

The nonattainment areas for each of the criteria pollutants can be viewed at: [www.epa.gov/green-book](http://www.epa.gov/green-book).

Detailed information on the SIPs can be viewed at:

[www.epa.gov/air-quality-implementation-plans/sip-status-reports](http://www.epa.gov/air-quality-implementation-plans/sip-status-reports).

## Public Health Impacts

**Ozone** is a photochemical oxidant and a major component of smog. Ozone is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of VOCs and NO<sub>x</sub> in the presence of sunlight. Although ozone in the upper atmosphere shields and protects the Earth from harmful radiation from the sun, high concentrations of ozone at ground level are a serious health and environmental concern. Even at low levels, ozone can damage lung tissue, reduce lung function, and sensitize the respiratory system to other irritants. Additionally, scientific evidence has indicated that ambient levels of ozone not only affect people with pulmonary conditions, such as asthma, but also normal, healthy adults and children.

**Particulate Matter (PM)** includes both solid particles and liquid droplets found in air. Many man-made and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. These solid and liquid particles come in a wide range of sizes. The coarse particles, less than 10 micrometers (µm) in diameter (PM<sub>10</sub>), pose a health concern since they can be inhaled into and accumulate in the respiratory system. The fine particles, less than 2.5 µm in diameter (PM<sub>2.5</sub>), are believed to pose even greater health risks. Due to their small size, these fine particles can lodge deep in the lungs. Individuals particularly sensitive to PM<sub>2.5</sub> exposure include older adults, people with heart and lung disease, and children. Health studies have shown a significant association between exposure to PM<sub>2.5</sub> and premature mortality.

PM<sub>2.5</sub> can be emitted directly from combustion engines or chemically formed in the atmosphere when certain gases are present. Direct PM<sub>2.5</sub> emissions can result from particles in exhaust fumes, from brake and tire wear, from road dust kicked up by vehicles (called fugitive road dust), and from highway and transit construction. Indirect PM<sub>2.5</sub> emissions can result from one or more of several exhaust components, including VOCs, NO<sub>x</sub>, sulfur oxides (SO<sub>x</sub>), and ammonia (NH<sub>3</sub>).

## Transportation Conformity

The CAA section 176(c) (42 US Code [U.S.C.] 7506(c)) requires that federally funded highway and transit project activities “conform to” state air quality goals found in SIPs. This process ensures that transportation and air quality agencies consult with one another to look for strategies to relieve traffic congestion, improve air quality, and provide communities with a safe and efficient transportation system.

The transportation conformity process is required in areas that have been designated by the U.S. EPA as nonattainment or maintenance areas (see Figures 7 and 8 on pages 10 and 11). A transportation conformity demonstration is required at least once every four years; or when an MPO adopts a new Plan or TIP; adds or deletes a regionally significant, nonexempt project in a Plan or TIP, or when an MPO significantly amends the scope or timing of construction of a nonexempt project.

Transportation conformity is demonstrated when federally funded highway and transit activities are determined not to cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) jointly make conformity determinations within air quality nonattainment and maintenance areas to ensure that federal actions are consistent with corresponding SIPs. The U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not found to conform to the CAA requirements governing the current NAAQS for transportation conformity.

This conformity demonstration is based on the current Final Rule under the CAA, including 40 CFR Part 93, as revised. The Final Rule dictates that conformity findings within the DVRPC planning area must be based on the applicable SIP budgets in all target analysis years. The demonstration process estimates emissions that will result from the region's transportation system and determines whether those emissions are within the limits outlined in respective SIPs and other applicable NAAQS requirements.

In multi-state nonattainment and maintenance areas that have SIP MVEBs for each state's portion of the nonattainment or maintenance area, conformity can be demonstrated for each state's subregion of the area. Since there are no additions or amendments or changes in scope or analysis years of regionally significant and nonexempt projects, in the FY2024 New Jersey TIP or the New Jersey portion of the DVRPC region, a conformity demonstration is not required for the DVRPC New Jersey counties.

## CHAPTER 2: Conformity Demonstration Overview

### DVRPC Plan and TIP

The Pennsylvania TIP is a staged, multiyear, and intermodal program of transportation projects covering the five counties in the Pennsylvania portion of the DVRPC planning area. The TIP is consistent with the

There are three categories of projects in the Plan and TIP:

**Regionally Significant Project:** a nonexempt highway or transit project on a facility that, regardless of its length, serves regional needs and is normally included in the regional travel demand model.

**Exempt Project:** a project listed in Table 2 or Table 3 of the Final Rule (40 CFR 93) that primarily enhances safety or aesthetics, maintains mass transit, continues current levels of ridesharing, or builds bicycle and pedestrian facilities.

**Not Regionally Significant Project/Nonexempt:** a nonexempt highway or transit project on a facility that does not serve regional needs or is not normally included in the regional travel simulation model, and does not fit into an exempt project category in Table 2 or Table 3 of the Final Rule (40 CFR 93).

Plan and is developed, pursuant to 23 CFR Part 450, to meet the federal requirement of being financially constrained to a funding level that is available to the region as established in the financial guidance provided by the state. All Plan and TIP project descriptions have been reviewed and approved by DVRPC's Transportation Conformity Interagency Consultation Group (TCICG) for appropriate Air Quality (AQ) codes and analysis years.

The *Connections 2050* Long-Range Plan, adopted by the DVRPC Board in September 2021, provides a broad planning framework for the region. The transportation component of the Plan includes a comprehensive long-range transportation plan for the DVRPC region. The *Connections 2050* Long-Range Plan includes over \$67 billion from traditional sources for regional transportation improvements. The fiscally-constrained Plan prioritizes transportation funding for rebuilding the region's infrastructure but also includes new major regional transportation projects. The Plan also advances and supports the region's land use plans and policies and proposes strategies to carry out those policies.

The Plan's financial component reflects current and projected federal authorization levels. Projected costs for Plan projects have been adjusted to account for inflation and to reflect the year of expenditure, as required by the FHWA/FTA Final Rule on Statewide and Metropolitan Transportation Planning and Programming.<sup>3</sup>

The CAA requires that, in nonattainment or maintenance areas, all regionally significant and nonexempt projects included in a Plan or TIP on facilities classified as principal arterials or higher—that is, those that can impact regional air quality—meet the conformity requirements established in the Final Rule. DVRPC must identify and conduct an emissions analysis on these projects in order to demonstrate that projects included in the Plan or TIP do not worsen air quality or inhibit the region's progress toward meeting the NAAQS.

<sup>3</sup> See 23 CFR 450.216(1), 23CFR 450.322(f) (10) (iv), and 23 CFR 450.23(h).

The project set, analyzed for conformity, includes all regionally significant projects funded in the Plan,<sup>4</sup> those in the current TIP, and those that have been introduced in previous TIPs but are not yet completed. Each project is classified by the first year that the project is included in the regional emissions analysis, also known as the analysis year. The emissions estimates for a particular analysis year include all of the projects that are expected to be open to traffic by that year.

### DVRPC AQ Code

DVRPC has developed an AQ coding scheme to identify projects that are included in the emissions analysis and the project's analysis year. The coding scheme is also used to identify which projects are exempt from the emissions analysis. All regionally significant, nonexempt projects are assigned a five-character alphanumeric AQ code that begins with a four-digit analysis year followed by the letter "M" to indicate that it was included in the TDM. For instance, a Plan or TIP project may have an AQ code of 2025M, in which case the project is identified as a regionally significant, nonexempt project, the emissions estimates of which are (1) included in the 2025 and all subsequent future analysis years, and (2) performed using the TDM network analysis technique.

DVRPC has also developed an internal coding scheme to identify each exempt project type based on those defined in the Final Rule. Table 3 shows the exempt project categories in the Final Rule and their corresponding DVRPC AQ codes. In cases in which multiple codes can apply to a project, the most representative code is assigned. The AQ code for each project is shown in the respective Plan and TIP documents.

Projects that have been determined not to be regionally significant as defined in the Final Rule, and do not fit into an exempt category, are labeled as "NRS." The TCICG has reviewed all projects and concurred on all assigned AQ codes in the Plan and the TIP.

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<sup>4</sup> The *Connections 2050* Plan also includes a list of unfunded aspirational projects that are consistent with the Plan's vision, but can be not afforded within fiscal constraint. As a result, these projects are not included in the Conformity analysis.

**Table 3: AQ Codes for Exempt and Not Regionally Significant Projects in the Plan and TIPs**

	<b>Exempt Project Category†</b>	<b>AQ Code</b>		<b>Exempt Project Category†</b>	<b>AQ Code</b>	
<b>Safety Projects</b>	Railroad/highway crossing	S1	<b>Air Quality Projects</b>	Continuation of ridesharing and vanpooling promotion activities at current levels	A1	
	Hazard elimination program	S2		Bicycle and pedestrian facilities	A2	
	Safer non-federal-aid system roads	S3		<b>Other Projects</b>	Specific activities that do not involve or lead directly to construction, such as planning and technical studies	X1
	Shoulder improvements	S4			Grants for training and research programs	X2
	Increasing sight distance	S5			Planning activities conducted pursuant to title 23 and 49 U.S.C.	X3
	Safety improvement program	S6			Federal aid systems revisions	X4
	Traffic control device and operating assistance other than signalization projects	S7	Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action		X5	
	Railroad/highway crossing warning devices	S8	Noise attenuation		X6	
	Guardrails, median barriers, crash cushions	S9	<b>No Regional Emissions Analysis Required</b>		Advance land acquisitions (23 CFR 712 or 23 CFR 771)	X7
	Pavement resurfacing and/or rehabilitation	S10			Acquisition of scenic easements	X8
	Pavement marking demonstration	S11			Plantings, landscaping, etc.	X9
	Emergency relief (23 U.S.C. 125)	S12			Sign removal	X10
	Fencing	S13			Directional and informational signs	X11
	Skid treatments	S14			Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)	X12
	Safety roadside rest areas	S15			Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational, or capacity changes	X13
	Adding medians	S16		<b>Not Regionally Significant</b>	Projects determined to be "Not Regionally Significant" and do not fit into an exempt category	NRS
	Truck-climbing lanes outside the urbanized area	S17				
	Lighting improvements	S18				
	Widening narrow pavements or reconstructing bridges (no additional travel lanes)	S19				
	Emergency truck pullovers	S20				
<b>Mass Transit Projects</b>	Operating assistance to transit agencies	M1	<b>No Regional Emissions Analysis Required</b>	Intersection channelization projects	R1	
	Purchase of support vehicles	M2		Intersection signalization projects at individual intersections	R2	
	Rehabilitation of transit vehicles	M3		Interchange reconfiguration projects	R3	
	Purchase of office, shop, and operating equipment for existing facilities	M4		Changes in vertical and horizontal alignment	R4	
	Purchase of operating equipment for vehicles (e.g., radios, fare boxes, lifts, etc.)	M5		Truck size and weight inspection stations	R5	
	Construction or renovation of power, signal, and communications systems	M6		Bus terminals and transfer points	R6	
	Construction of small passenger shelters and information kiosks	M7	<b>Not Regionally Significant</b>	Projects determined to be "Not Regionally Significant" and do not fit into an exempt category	NRS	
	Reconstruction or renovation of transit buildings and structures	M8				
	Rehabilitation or reconstruction of track structures, track, and tracked-in existing rights-of-way	M9				
	Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet	M10				
	Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771	M11				

Source: DVRPC, 2024

†40 CFR 93 Sections 126 and 127.

### Analysis Year

Required analysis years include SIP budget years, designated NAAQS attainment dates, and the Plan horizon year. All other analysis years must be no more than 10 years apart.

The analysis years for this conformity demonstration are listed in Table 4. The years 2025 (PM<sub>2.5</sub> SIP budget year), 2030 (PM<sub>2.5</sub> SIP budget year for Delaware County only), and 2050 (the Plan horizon year) are required analysis years, and 2035 and 2045 are interim years within 10 years of the previous analysis.

**Table 4: Mobile Source Analysis Years**

Year	Ozone	PM <sub>2.5</sub>	Note
2025	√	√	Interim Year and PM <sub>2.5</sub> SIP budget year
2030		√	PM <sub>2.5</sub> SIP budget year (Delaware County only)
2035	√	√	Year within 10 years of previous analysis
2045	√	√	Year within 10 years of previous analysis
2050	√	√	Horizon Year of the Plan

Source: DVRPC, 2024

Table 5 describes the project sets that are considered in each future-year analysis.

**Table 5: Projects Included in the Regional Emissions Analysis**

Analysis Year	Project Set
2025 (TIP year and PM <sub>2.5</sub> SIP budget year)	All regionally significant highway and transit facilities, services, and activities currently in place and Additional highway and transit projects that are scheduled to open prior to 2025
2030 (SIP budget year for Delaware County, PA only)	All regionally significant highway and transit projects in the 2025 model network and Additional highway and transit projects that are scheduled to open from 2025 to 2029 in Delaware County
2035 (interim year)	All regionally significant highway and transit projects in the 2025 model network and Additional highway and transit projects that are scheduled to open from 2025 to 2034
2045 (interim Year)	All regionally significant highway and transit projects in the 2035 model network and Additional highway and transit projects that are scheduled to open from 2035 to 2044
2050 (DVRPC Plan horizon year)	All regionally significant highway and transit projects in the 2045 model network and Additional highway and transit projects that are scheduled to open from 2045 to 2049

Source: DVRPC, 2024



## Emissions Analysis

Once the regionally significant and nonexempt projects in the Plan and TIP are identified and analysis years are assigned, regional emissions estimates are developed through a series of models that simulate travel demand in the region and then convert those travel characteristics into estimates of emissions of the pollutants of concern.

Plan and TIP projects are coded into the DVRPC TDM (Travel Improvement Model version 2.5.1). The TDM represents the regional transportation network and uses inputs like population, employment, and land use data to develop estimates for trip length, vehicle miles traveled (VMT), and traffic volumes on the transportation network. The model includes the base transportation network of roads and transit projects that have been constructed, and new networks are built to include projects from the Plan and TIP according to the projects' analysis years.

Outputs of the TDM are then processed and entered into the emissions estimation model, MOVES 4. The MOVES model will then take the TDM outputs, information on meteorology, fuel information, data on vehicle types and vehicle populations, and other critical inputs to develop a projected emissions estimate for a given analysis year and pollutant, which is then compared against the SIP MVEB to demonstrate conformity.

### Latest Planning Assumptions

The Final Rule requires that the most current available planning assumptions be used in determining transportation conformity. In addition to the Plan and TIP projects that are included in the conformity analysis, planning assumptions, such as population and employment estimates, transit and toll road policies, land use assumptions, VMT, vehicle mix percentages, travel time-of-day patterns, transit ridership, and vehicle fleet age are critical inputs to the TDM.

Planning assumptions are updated following U.S. EPA and FHWA joint guidance (EPA420-B-08-901) that clarifies the implementation of the latest planning assumption requirements in 40 CFR 93.110. This analysis utilizes the best available latest traffic, vehicle fleet, and environmental data to estimate regional highway emissions.

In Pennsylvania, the Pennsylvania Department of Transportation (PennDOT) updates the key planning assumptions on a triennial basis to support the U.S. EPA's National Emissions Inventory and FHWA's latest planning assumption requirements for transportation conformity. The PennDOT triennial data update is typically used to inform the planning assumptions for the future analysis years used for transportation conformity.

Due to the impacts that Coronavirus Disease 2019 (COVID-19) has had on the latest 2020 triennial data update, PennDOT has determined that these estimates of VMT, vehicle mix percentages, travel time-of-day patterns, transit ridership, and vehicle fleet age may not be reflective of future conditions or longer-term trends. The 2020 information indicates significant reductions in passenger vehicle travel and transit ridership. In addition, vehicle registration data shows very low vehicle sales and older vehicle scrappage. The 2020 information is not reflective of other historic data collected over the last 15–20 years, other than in 2010 during the last economic recession. PennDOT, in coordination with the Pennsylvania Air Quality Workgroup (which serves as the TCICG), decided not to use the 2020 VMT, traffic, and transit data to inform future VMT projections for conformity. The MPO's travel model continued to utilize the latest socioeconomic forecasts to guide VMT growth rates. In addition, PennDOT, in consultation with the Air Quality Workgroup, decided not to use the 2020 vehicle age data to inform future age distributions and vehicle sales as this information is not

reflective of historic trends. This conformity determination relies on vehicle age assumptions used for past conformity analyses. VMT growth rates have been updated with corrected PennDOT HPMS data for 2022.

All other data assumptions for the conformity analysis relied on the latest available planning assumptions or national/local defaults consistent with methods used for past conformity analyses and the U.S. EPA's technical guidance. This includes information and characteristics related to fuels, inspection and maintenance program parameters, heavy-truck long duration idling, and environmental data (e.g., temperatures and humidity).

Planning assumptions, as well as the list of Plan and TIP projects, are reviewed and approved by the TCICG before DVRPC begins the regional emissions analysis.

The planning assumptions and project lists used in this demonstration are the latest and most current assumptions available as of April 18, 2024, which serves as the "start of analysis" date for the conformity determination.

### Population and Employment Estimates

The population and employment estimates used in this conformity determination are the latest available at the traffic analysis zone (TAZ) level. Population and employment forecasts were adopted by the DVRPC Board on June 24, 2021. These estimates include forecasts for the Plan horizon year of 2050 and are posted on the DVRPC website under the Quick Links at <https://www.dvrpc.org/plan/>. This data can also be reviewed upon request.

### Transit and Toll Road Policies

As part of the latest planning assumptions, current transit operations policies and road toll structures are considered. The transit person trips produced by the modal split component of the DVRPC TDM are considered "linked" in the sense that they do not include any transfers that may have occurred either between transit trips or between auto approaches and transit lines. Therefore, the transit assignment procedure accomplishes two major tasks. First, the transit trips are "unlinked" to include transfers; and second, these "unlinked" transit trips are associated with specific transit facilities to produce link, line, and station volumes. These tasks are performed simultaneously within the transit assignment model, which assigns the transit trip matrix to paths built through the transit network, which is not capacity constrained.

All fares entering the transit network are "blended" by operating entity. For each operator, different existing fare types (e.g., cash; transfer charge; and daily, weekly, and monthly passes) are blended into a single fare policy based on the percentage of each fare type and use in the 2019 fare structure. Then the future fare for each operator is held constant in current dollars. All current operating plans, ridership, and service levels of transit systems are built into the transit network and incorporated into the future-year networks, as well. Future-year transit networks are also augmented with any new services identified in the corresponding DVRPC Plan and TIPs. Table 6 details all transit operators included in the transit network and their operational assumptions.

Other transportation-related costs, such as automobile operating costs, gasoline costs, parking costs, and road/bridge tolls, are also based on current and available data and are held constant in current dollars into the future analysis years.

**Table 6: Transit Operation Assumptions**

Transit Companies	Fares	Operating Plan /Service Level
SEPTA City Transit Division	Specified in the transit network by operator and by analysis year; held constant in year 2019 dollars	Specified in the transit network by operator and by analysis year
SEPTA Suburban Victory Division		
SEPTA Suburban Frontier Division		
SEPTA Regional Rail Division		
NJ Transit Mercer Division		
NJ Transit Southern Division		
NJ Transit Railroad Division		
PATCO High-Speed Line (DRPA)		
Pottstown Area Rapid Transit		
Krapf's Coaches		

Source: DVRPC, 2023

Note: SEPTA = Southeastern Pennsylvania Transportation Authority; NJ Transit = New Jersey Transit; DRPA = Delaware River Port Authority; PATCO = Port Authority Transit Corporation.

### Travel Demand Simulation

DVRPC’s TDM was validated in 2019 following FHWA guidance and features an expanded geography to improve travel simulation within, through, and across the region. The current model includes detailed transportation network data for the DVRPC region, plus less detailed information on the transportation network in the 16 counties surrounding the DVRPC region. The current DVRPC TDM meets the federal transportation authorization and planning requirements, as well as requirements included in the CAA and the Final Rule.

DVRPC’s TDM is a four-step process that ultimately assigns travel patterns among and within TAZs and modes of transportation using the built transportation networks, along with the planned highway and transit networks described by the Plan and the TIP. Travel patterns and modal splits are then run through a postprocessor in preparation for emissions analysis by MOVES 4. The TCICG has reviewed and approved DVRPC’s travel demand modeling process.

### Emissions Model

The CAA requires the U.S. EPA to regularly update emissions models. In 2009, the U.S. EPA required that the MOVES model become the official emissions estimation model used for SIP development and transportation conformity determinations. The MOVES family of models estimates on-road mobile emissions based on an operational mode that accounts for different driving patterns and emissions profiles from various vehicle types. Beginning in September 2025, MPOs and state DOTs are required to use the MOVES 4 emissions model to demonstrate transportation conformity. DVRPC has decided to use the MOVES 4 model for this determination. For a detailed description of the MOVES model, please visit: [www.epa.gov/moves](http://www.epa.gov/moves).

## Conformity Tests

DVRPC used the applicable SIP budgets to demonstrate transportation conformity for ozone and PM<sub>2.5</sub>.

The DVRPC region was designated as a marginal nonattainment area for the 2015 Ozone Standard on June 4, 2018. Implementation guidance for this standard was released by the U.S. EPA in December 2018, and this conformity determination was conducted following the 2015 Eight-Hour Ozone NAAQS implementation guidance (83 FR 62988). The Philadelphia Ozone Nonattainment Area (NAA) did not meet the August 2021 designated attainment date for ozone (87 FR 21842). In November 2022, the U.S. EPA finalized the rule to re-designate the nonattainment area to moderate nonattainment for the 2015 Ozone Standard.

Pennsylvania submitted an attainment SIP demonstrating that the Pennsylvania portion of the nonattainment area will meet the 2015 Ozone Standard by the designated attainment date for moderate nonattainment areas by August 2024. This SIP includes updated MVEBs for the year 2023. This SIP has not yet been approved for use for transportation conformity purposes by the U.S. EPA but this demonstration shows that the emissions from the *Connections 2050* Plan and FY2025 TIP for Pennsylvania are below these proposed MVEBs and conform to the SIP requirements in anticipation of the final SIP approval.

This demonstration shows conformity to the 2008 Ozone SIP Budget in Pennsylvania which was approved by the U.S. EPA for conformity purposes in February 2011. The proposed 2023 Ozone SIP budgets are included in this report to show conformity to that MVEB when it is approved and found adequate for conformity purposes by the U.S. EPA. The regional emissions analysis for ozone was conducted using MOVES 4. Analysis is conducted for ozone emissions for a typical summer work weekday.

In April 2015, the U.S. EPA approved the maintenance plan for the 2006 24-Hour PM<sub>2.5</sub> standard in the Pennsylvania portion of the DVRPC region (80 FR 22112). This maintenance plan includes MVEBs for direct PM<sub>2.5</sub> and precursor NO<sub>x</sub> for the 1997 Annual and 2006 24-hour standards.

The U.S. EPA approved a maintenance plan for the 2012 Annual PM<sub>2.5</sub> standard in Delaware County in November 2019 (84 FR 51420). The SIP contains MVEBs for direct PM<sub>2.5</sub> and precursor NO<sub>x</sub> to be used to demonstrate transportation conformity.

All PM<sub>2.5</sub> MVEBs are expressed in tons of emissions per year for both the annual and 24-hour standards.

The U.S. EPA has ruled that exhaust and brake/tire wear must be included in the regional analysis of direct PM<sub>2.5</sub> emissions but has also ruled that fugitive road dust does not need to be included in this analysis in the DVRPC region. Thus, the only components of direct PM<sub>2.5</sub> emissions in this DVRPC conformity iteration are tailpipe exhaust and brake/tire wear.

For the indirect PM<sub>2.5</sub> emissions (also called PM<sub>2.5</sub> precursors), the U.S. EPA has identified four potential transportation-related PM<sub>2.5</sub> precursors: VOCs, NO<sub>x</sub>, SO<sub>x</sub>, and NH<sub>3</sub>. The Pennsylvania DEP has determined that NO<sub>x</sub> is contributing to regional PM<sub>2.5</sub> formation and therefore must be included in the PM<sub>2.5</sub> precursor analysis.

Tables 7–9 show the governing MVEBs to be utilized in this iteration of conformity demonstration.

**Table 7: Ozone Emissions Budgets (Tons/Day)**

Pollutant	Budget†	Pennsylvania Subregion (tons/day)
VOCs	2008 Budget	61.09 (all counties)
	2023 Budget (proposed)	29.57 (all counties)
NO <sub>x</sub>	2008 Budget	108.78 (all counties)
	2023 Budget (proposed)	52.21 (all counties)

Source: DVRPC, 2024

†Ozone budgets are reported to the second decimal in accordance with the SIP. SIP budgets for ozone are for a typical July day.

**Table 8: Pennsylvania PM<sub>2.5</sub> Emissions Budgets (Tons/Year)**

Pollutant	Budget†	Pennsylvania Subregion (tons/year)
Annual and 24-Hour Direct PM <sub>2.5</sub> ◆	2025 Budget (tons per year)	1,316
Annual and 24-Hour Precursor NO <sub>x</sub> ◆		25,361

Source: DVRPC, 2024

†PM<sub>2.5</sub> budgets are rounded off to the nearest integer in accordance with the SIP.

◆SIP budgets for Annual and 24-Hour PM<sub>2.5</sub> are the same value expressed in tons/year.

**Table 9: Delaware County PM<sub>2.5</sub> Emissions Budgets (Tons/Year)**

Pollutant	Budget†	Delaware County (tons/year)
Annual and 24-Hour Direct PM <sub>2.5</sub> ◆	2022 Budget (tons per year)	79
Annual and 24-Hour Precursor NO <sub>x</sub> ◆		2,016
Annual and 24-Hour Direct PM <sub>2.5</sub> ◆	2030 Budget (tons per year)	53
Annual and 24-Hour Precursor NO <sub>x</sub> ◆		956

Source: DVRPC, 2024

†PM<sub>2.5</sub> budgets are rounded off to the nearest integer in accordance with the SIP.

◆SIP budgets for Annual and 24-Hour PM<sub>2.5</sub> are the same value expressed in tons/year.



## CHAPTER 3: Regional Emissions Analysis

### Travel Demand Simulation Results

Quantitative analyses for this iteration of transportation conformity determination for the DVRPC region began on April 18, 2024. All planning assumptions utilized in this demonstration are the latest and most current as of that date. The TDM analysis includes all regionally significant and nonexempt projects from the *Connections 2050* Long-Range Plan and the FY2025 TIP for Pennsylvania segregated into networks according to the anticipated date that the facilities will be open to traffic.

Results from the TDM, including speed distribution, VMT by vehicle type, road-type distribution, ramp fraction, VMT by day and month, and VMT by hour, were input into the MOVES 4 emissions analysis model. These input files are provided to the U.S. EPA for review and are available upon request.

For ozone analysis, a second speed distribution is performed before being analyzed by the MOVES 4 model. The postprocessor applies a factor to the assigned volumes from the TDM that increases the annual average weekday volume to an average July weekday volume (these factors vary by county and functional class). This speed distribution is then organized into a MOVES-formatted input file, and the daily speed distribution is used for ozone emissions analysis to determine VOC and NO<sub>x</sub> emissions estimates for a typical summer work weekday.

### Emissions Estimate Results

Mobile source emissions estimates are outputs of the MOVES 4 model. The regional emissions analysis must meet all conformity tests in the Final Rule. Specifically, emissions of VOCs, NO<sub>x</sub>, and PM<sub>2.5</sub> must be less than the approved MVEBs.

Tables 10 and 11 present the results of these calculations for the transportation conformity simulation for the critical ozone precursors. The Final Rule requires that until MVEBs are established for the 2008 or 2015 Eight-Hour Ozone NAAQS, the approved SIP MVEB for the 1997 Ozone Standard are to be used to demonstrate conformity. Pennsylvania DEP has submitted an Attainment Demonstration that includes SIP MVEBs for 2023 and these budgets are pending approval by U.S. EPA.

**Table 10:** VOCs Emissions Analysis Results (Tons/Day)

		<b>2008 SIP MVEB<sup>†</sup></b>	<b>2023 SIP MVEB<sup>*</sup></b>	<b>2025 Emissions</b>	<b>2035 Emissions</b>	<b>2045 Emissions</b>	<b>2050 Emissions</b>
Pennsylvania	Emissions from MOVES 4	61.09	29.57	20.78	14.01	11.29	10.93

Source: DVRPC, 2024

<sup>†</sup>The most recent Eight-Hour Ozone SIP MVEBs will apply to all future analysis years. All emissions are rounded off to the nearest hundredth of a ton per day.

<sup>\*</sup>Pending U.S. EPA approval

**Table 11: NO<sub>x</sub> Emissions Analysis Results (Tons/Day)**

		2008 SIP MVEB <sup>†</sup>	2023 SIP MVEB <sup>*</sup>	2025 Emissions	2035 Emissions	2045 Emissions	2050 Emissions
Pennsylvania	Emissions from MOVES 4	108.78	52.21	21.30	8.15	6.57	6.47

Source: DVRPC, 2024

<sup>†</sup>The most recent Eight-Hour Ozone SIP MVEBs will apply to all future analysis years. All emissions are rounded off to the nearest hundredth of a ton per day.

<sup>\*</sup>Pending U.S. EPA approval

Table 12 provides the emissions estimate results for the 2006 PM<sub>2.5</sub> Maintenance Area in Pennsylvania, and Table 13 provides the emissions estimates and MVEB for the Delaware County 2012 Annual PM<sub>2.5</sub> Maintenance Area.

Since the PM<sub>2.5</sub> SIPs provide MVEBs expressed in annual values (tons/year), conformity is demonstrated by comparing emissions estimates against these budgets in those terms. Each future-year emissions estimate needs to be less than its associated SIP MVEB budget.

**Table 12: Annual and 24-Hour Direct PM<sub>2.5</sub> and NO<sub>x</sub> Emissions Analysis Results (Tons/Year) for Pennsylvania**

		2025 SIP MVEB <sup>†</sup>	2025 Emissions	2035 Emissions	2045 Emissions	2050 Emissions
Direct PM <sub>2.5</sub>	DVRPC—PA	1,316	340	228	199	194
PM <sub>2.5</sub> Precursor (NO <sub>x</sub> )	DVRPC—PA	25,361	7,160	2,826	2,315	2,284

Source: DVRPC, 2024

<sup>†</sup>The most recent MVEBs apply to all future analysis years. All emissions are rounded to the nearest integer.

**Table 13: 2012 Annual Direct PM<sub>2.5</sub> and NO<sub>x</sub> Emissions Analysis Results (Tons/Year) for Delaware County, Pennsylvania**

		2022 SIP MVEB <sup>†</sup>	2025 Emiss- ions	2030 SIP MVEB <sup>†</sup>	2030 Emiss- ions	2035 Emiss- ions	2045 Emiss- ions	2050 Emiss- ions
Direct PM <sub>2.5</sub>	Delaware County	79	44	53	35	30	26	25
PM <sub>2.5</sub> Precursor (NO <sub>x</sub> )	Delaware County	2,016	907	956	522	360	295	290

Source: DVRPC, 2024

<sup>†</sup> Associated 2022 and 2030 MVEBs apply to all future analysis years. All emissions are rounded to the nearest integer.



## Meeting the Conformity Criteria

Collectively, these tables show that the estimated emissions of VOCs, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed the respective MVEBs included in approved SIPs discussed in the previous sections of this conformity demonstration. Tables 10 through 13 cumulatively demonstrate that the Plan and the TIPs conform to the SIPs with respect to the MVEBs in the corresponding analysis year.

Table 14 indicates DVRPC's responses to the evaluation criteria for the Plan and TIPs, as well as the conformity evaluation criteria from 40 CFR Part 93.

**Table 14:** Evaluation of the Plan, TIPs, and Conformity Determination Criteria

Corresponding 40 CFR Part 93 Section(s)	Evaluation Criteria	DVRPC Response
§93.106(a)(1)	Are the transportation plan horizon years correct?	Yes. The analysis years of 2025, 2030 (Delaware County, Pennsylvania, only), 2035, 2045, and 2050 correspond to the SIP budget, interim years within a 10-year timeframe, and the DVRPC Plan horizon year.
§93.106(a)(2)(i)	Does the Plan quantify and document the demographic and employment factors influencing transportation demand?	Yes. The <i>Connections 2050</i> Long-Range Plan does quantify and document demographic and employment factors influencing transportation demand. Future population and employment forecasts were developed with member counties and adopted by the DVRPC Board.
§93.106(a)(2)(ii)	Is the highway and transit system adequately described in terms of regionally significant additions or modifications to the existing transportation network that the transportation Plan envisions to be operational in horizon years?	Yes. The regionally significant additions and modifications to the network utilized in this conformity analysis are listed and described. Detailed information regarding each project can be found in the respective Plan and TIP documents.
§93.108	Are the transportation Plan and TIPs fiscally constrained?	Yes. The Plan and the TIP are constrained to reasonably anticipated financial resources, as required by federal regulations, and are based on year-of-expenditure costs.
§93.109(c)	Are the regional conformity tests requirements met for all nonattainment and maintenance areas?	Yes. PM <sub>2.5</sub> , VOCs, and NO <sub>x</sub> MVEBs have been approved by the U.S. EPA. DVRPC performs budget tests to demonstrate the PM <sub>2.5</sub> and ozone conformity of the Plan and the TIP.

<continued>

Corresponding 40 CFR Part 93 Section(s)	Evaluation Criteria	DVRPC's Response
§93.110	Are the conformity determinations based upon the latest planning assumptions?	Yes.
	Is the conformity determination, with respect to all other applicable criteria in §93.111-93.119, based upon the most recent planning assumptions in force at the time that the conformity determination began?	Yes. This conformity determination utilizes the most recent planning assumptions as of April 18 2024, the start of analysis dates for this conformity determination for the Plan and TIP.
	Are the assumptions derived from the estimates of current and future population, employment, travel, and congestion the most recently developed by the MPO or other designated agency? Is the conformity determination based upon the latest assumptions about current and future background concentrations?	Yes. This conformity determination utilizes the most recent demographic and employment data, which were adopted by the DVRPC Board in June 2021. Also, other planning assumptions and travel data are derived from the most current information available to DVRPC.
	Are any changes in the transit operating policies (including fares and service levels) and assumed transit ridership discussed in the determination?	Yes. Applicable transit operating policies and transit ridership are discussed in this document and were verified through the consultation process. (See Chapter 2, pp. 20–21).
	Does the conformity determination include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time?	Key transit and toll assumptions outlined in this document were verified through the consultation process. (See Chapter 2, pp. 20–21).
	Does the conformity determination use the latest existing information regarding the effectiveness of the TCMs and other implementation plan measures that have already been implemented?	Currently, there are no adopted TCMs in the corresponding SIPs.
Are key assumptions specified and included in the draft documents and supporting materials used for the interagency and public consultation, as required by §93.105?	Key assumptions are specified and other supporting documents are included in this conformity determination document, which is available to the TCICG and the public.	

*<continued>*

Corresponding 40 CFR Part 93 Section(s)	Evaluation Criteria	DVRPC's Response
§93.111	Is the conformity determination based upon the latest emissions model?	Yes. The transportation conformity determination for the Plan and the TIP is based on MOVES 4 analysis.
§93.112	Did the MPO make the conformity determination according to the consultation procedures of the Final Rule or the state's conformity SIP?	<p>Yes. Formal interagency consultation meetings with the U.S. EPA, FHWA, FTA, and state environmental and transportation agencies were held according to the consultation procedures consistent with the requirements of all applicable regulations, including §93.105(a) and (e), to consider input assumptions and to review findings regarding transportation conformity.</p> <p>In compliance with 23 CFR 450, a 30-day public comment period and public meetings were held to receive comments regarding the transportation conformity of the Plan and the TIP under all governing NAAQS.</p>
§93.113(b) §93.113(c)	Are TCMs being implemented in a timely manner?	There are currently no adopted TCMs in the SIPs.
§93.118	For areas with SIP Budgets: is the Plan, TIP, or project consistent with the established MVEB(s) in the applicable SIP?	Yes. Projects contained in the Plan and the TIP result in fewer emissions than the established budgets for all applicable pollutants in each analysis year.
§93.122(a)(1)	Does the conformity analysis include all regionally significant projects?	Yes. The project sets for the Plan and the TIP include all regionally significant projects.
§93.122(a)(6) §93.122(a)(7)	Are reasonable methods and factors used for the regional emissions analysis consistent with those used to establish the emissions budget in the applicable SIP?	Yes. The ambient temperatures and other factors used in the analysis, including the methods for off-network VMT and speed, have been reviewed by the TCICG and deemed reasonable.
§93.122(b)	Is there a network-based travel model of reasonable methods to estimate traffic speed and delays for the purpose of transportation-related emissions estimates?	Yes. DVRPC uses a network-based model that runs iteratively to obtain convergence on input/output highway and transit travel speed. It is sensitive to travel time, costs, and other factors affecting travel choices.

Source: DVRPC, 2024



## CHAPTER 4: Stakeholder Participation

### Interagency Consultation Group Meetings

DVRPC participated in a series of TCICG meetings and correspondence for this iteration of the transportation conformity demonstration of the Plan and the TIP.

Consultation with the TCICG was conducted through a virtual meeting (Pennsylvania Air Quality Working Group Meeting on February 7, 2024), email, SharePoint file sharing, and phone discussions. Planning assumptions, model inputs, and project lists that included amendments to the Plan and Pennsylvania TIP were reviewed and approved by the TCICG. All comments approving the DVRPC conformity process were submitted to PennDOT by the TCICG by April 18, 2024.

Additional consultation occurred via email and phone correspondence between TCICG members throughout the conformity determination process. Final decisions on items of discussion were summarized and shared with the TCICG.

Represented federal, state, and local partners on the TCICG included U.S. EPA Region III office, FHWA PA Division Office, Pennsylvania DEP, PennDOT, SEPTA, and DRPA/PATCO. The consultant firm of Michael Baker Jr., Inc., also participated in the TCICG process because of its extensive involvement and expertise in the transportation conformity processes.

### Public Participation

DVRPC held a mandated 30-day public comment period beginning on June 4, 2024, to receive comments on the draft conformity findings. The announcement for the public comment period for the conformity determination of the Plan and the TIP appeared in several major newspapers throughout the region during the week of June 4, 2024. An announcement of the public comment period appeared in DVRPC's June and July newsletters, which goes to nearly 13,000 subscribers. The draft conformity document was available online at [www.dvrpc.org/AirQuality/Conformity/](http://www.dvrpc.org/AirQuality/Conformity/) and hard copies of the Executive Summary of the draft document were available at libraries throughout the region and at DVRPC's offices.

As part of the comment period, an online meeting was held on June 10, 2024, at 6:00 PM, via webinar and a call-in function; and a hybrid, virtual and in-person, public information session was held on June 11, 2024, at 6:00 PM. The virtual portion was available via webinar and in person presentations were given at the DVRPC offices in Philadelphia. The comment period closed on July 8, 2024, at 5:00 PM.

DVRPC accepted public comments on the draft conformity document:

- online at [www.dvrpc.org/AirQuality/Conformity/](http://www.dvrpc.org/AirQuality/Conformity/),
- by email at [airconformity@dvrpc.org](mailto:airconformity@dvrpc.org); and
- by mail at the address at the end of this document, Attention: TIP/Plan/Conformity Comments.

There were no relevant comments on the conformity determination submitted to DVRPC.

The DVRPC Board adopted the conformity findings, via Resolution B-FY25-001 on July 25, 2024.



## CHAPTER 5: Conclusion

The DVRPC Plan and FY2025 Pennsylvania TIP are found to be in conformity with the current Pennsylvania SIPs under the CAA. The forecasted emissions levels of VOCs, NO<sub>x</sub>, and PM<sub>2.5</sub> do not exceed the respective budgets established by the state in accordance with the Final Rule under the current NAAQS governing applicable pollutants. DVRPC confirms that the transportation conformity analysis meets all applicable conformity criteria, including, but not limited to, the following:

- that the Plan and the TIP are fiscally constrained [40 CFR 93.108];
- that this determination is based on the latest planning assumptions [40 CFR 93.110];
- that this determination is based on the latest emissions estimation model available [40 CFR 93.111];
- that DVRPC has made the determination according to the applicable consultation procedures [40 CFR 93.112];
- that the Plan and the TIP do not interfere with the timely implementation of TCMs [40 CFR 93.113];  
and
- that the Plan and the TIP are consistent with the MVEBs in the applicable SIPs [40 CFR 93.118].

These findings demonstrate transportation conformity of the DVRPC *Connections 2050* Long-Range Plan and the FY2025 TIP for Pennsylvania with the corresponding state SIPs and the Final Rule requirements under the CAA, including:

- the 1997, 2008, and 2015 Eight-Hour Ozone NAAQS in the Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE Ozone Nonattainment Area;
- the 2006 24-Hour PM<sub>2.5</sub> NAAQS in the Philadelphia–Wilmington, PA–NJ–DE PM<sub>2.5</sub> Maintenance Area,  
and
- the 2012 Annual PM<sub>2.5</sub> NAAQS in the Delaware County, PA, PM<sub>2.5</sub> Maintenance Area.





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# Appendix

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## Appendix: Regionally Significant and Nonexempt Projects in the *Connections 2050* Long-Range Plan and FY2025 TIP for Pennsylvania

The projects listed in this Appendix were included in the regional conformity analysis. Descriptions of the improvements for Plan projects are included in the tables. Full descriptions of TIP projects are available in the relevant TIP documents by referencing the MPMS number.

### Air Quality Significant Pennsylvania *Connections 2050* Long-Range Plan MRPs

MRP ID	Project Title	Improvements	AQ Analysis Code
<b>Highway</b>			
20	I-95 and I-476 Interchange	One new lane in each direction on I-95 through the interchange. Addition of lane on-ramp from southbound I-476 to southbound I-95.	2050M
32	I-476 (PA Turnpike Northeast Extension) Widening	Reconstruct and widen to six lanes from Lansdale to Quakertown.	2035M
34	County Line Road	Reconstruct and widen between US 202 and Stump Road and between Kulp Road and PA 611.	2035M
35	I-95 at PA Turnpike Interchange - Stage 2	New partial interchange directly connects these two highways. Includes Sections A, C, D30, and E, which are primarily the Turnpike mainline reconstruction and widening; and D40, which completes the remaining movements at the new interchange.	2035M
36	I-95 at Scudders Falls Bridge Widening	Complete replacement of the existing four-lane, 4.4-mile, Scudder Falls Bridge over the Delaware River from the Route 332 interchange in Bucks County, PA, to the Bear Tavern Road interchange in Mercer County, NJ. Includes six lanes of through traffic (three in each direction), two auxiliary northbound lanes for entry/exit travel, and one auxiliary southbound lane for entry/exit travel.	2025M
37	US 1 at PA Turnpike	Reconstruct from I-276 (PA Turnpike) to NJ state line; widen from PA Turnpike to PA 413.	2045M
48	US 30/Coatesville-Downingtown Bypass (Western Section)	Reconstruct from PA 10 to just west of Reeceville Road; complete missing movements at PA 82, Airport Road, and Bus. 30/PA 10 interchanges.	2035M
50	US 322 from Clayton Park Drive to I-95	Reconstruct and widen from Clayton Park Drive to I-95.	2035M
54	Henderson Road and South Gulph Road	Widen Henderson Road from South Gulph Road to Shoemaker; widen South Gulph Road from Crooked Lane to I-76 Gulph Mills intersection.	2045M
56	US 202 (Section 600) Widening	Widen and reconstruct from Johnson Highway to PA 309.	2035M
57	PA 309 Connector Road	Construct new road from Allentown Road to County Line Road; improve PA 309 interchange.	2035M
65	I-95 North Reconstruction	Reconstruct from Race Street to State Road; interchange improvements at Vine, Girard, Allegheny, Betsy Ross Bridge, Bridge, and Cottman interchanges.	2045M

MRP ID	Project Title	Improvements	AQ Analysis Code
98	US 422 Mainline Widening (River Crossing)	Reconstruct and widen from four to six lanes from US 202 to PA 363.	2045M
101	Bryn Mawr Avenue Extension	Bypass for PA 3 West Chester Pike and PA 252 Newtown Street intersection.	2050M
110	Route 611 Improvements Willow Grove Interchange	The project will be widening the southbound PA 611 ramp to the PA Turnpike from one lane to two lanes.	2035M
111	I-276 and Virginia Drive.	Add full movements.	2035M
112	I-276 and Henderson Road	New interchange.	2045M
113	I-276 and Lafayette Street/Ridge Avenue Ramp Modifications	Phases 4 and 5 of a new cashless tolling interchange at the intersection of I-276 / Lafayette Street/Ridge Pike in Norristown, PA.	2035M
114	I-276 and PA 63 Welsh Road	New interchange.	2035M
115	I-95/US 322/Highland Avenue Interchange Ramp Modifications	Realign I-95 and add new movements at interchange to US 322, Bethel Road, and Highland Avenue.	2035M
117	Bridgewater Road Extension	Extend roadway from Concord Road to PA 452/US 322.	2035M
119	Bristol Road Extension	Extend roadway from US 202 to Park Avenue.	2035M
120	Belmont Avenue at I-76 Interchange	Widen Belmont Avenue to provide additional lanes, intersection, and streetscape improvements; modify I-76 and railroad overpasses.	2045M
123	US 202 and US 1 Loop Road	Complete southwestern loop road.	2030M
130	I-476 Active Traffic Management	Part-time shoulder use and other operational strategies from PA 3 to I-95.	2035M
132	I-76 Integrated Corridor Management	Variable speed limits, queue detection, dynamic lane assignments, junction control improvements, adaptive ramp metering, continuous monitoring systems, and responsive traffic control, coordination with SEPTA.	2035M
137	US 30/Coatesville-Downingtown Bypass (Eastern)	Reconstruct and either part-time shoulder use or flex lanes from just west of Reeceville Road to Quarry Road including six interchange projects.	2035M
158	PA Turnpike	All-Electronic Tolling whereby drivers will pay their tolls using either E-ZPass or the PA Turnpike TOLL BY PLATE program.	2035M
161	PA 23 and Trout Creek Road Bridge	Replace weight-restricted bridge on a new alignment; realign roadway between Moore Road and Vandenberg Road, providing two westbound lanes and one eastbound lane.	2035M
163	Ridge Pike	Reconstruct from Butler Pike to Philadelphia City Line; widen from three to four lanes from Church Lane to Philadelphia. Interconnect signals.	2035M
188A	US 1 (Roosevelt Boulevard) Operational Improvements - Phase 1	Intersection and roadway improvements along US 1 from Broad Street to Adams Avenue and from Adams Avenue to Old Lincoln Highway.	2035M
207	Hillman Drive Extension	This project will complete the remaining unfinished section of the loop road system surrounding the intersection of US Routes 1 and 202. Completion will fully mitigate operational issues, including traffic and pedestrian safety and traffic delays.	2030M

MRP ID	Project Title	Improvements	AQ Analysis Code
217	PA 100 at Exton Station	Additional northbound lane between Pottstown Pike on-ramp and the US 30 Exton bypass.	2035M
226	Ship Road and US 30 Business Couplet	Convert present location of Ship Road to northbound only and construct a southbound leg, as well as a 10-foot-wide multimodal trail.	2035M
238	PA 663 from Portzer Road to Hickory Drive	Widen to four lanes between Portzer Road and Hickory Drive, including turn lanes; and construct eight-foot-wide bike/pedestrian pathway.	2035M
244	Horsham Road Widening	Widen to two through lanes in each direction from Limekiln Pike to Davis Grove. Widen Limekiln Pike to two through lanes at intersection with Horsham Road.	2035M
247	Ashburn Road Extension	0.34-mile extension to Township Line Road.	2035M
255	Route 332 Bypass	Increase capacity of the Route 332 bypass between Stony Hill Road and the I-295 interchange in Lower Makefield Township, Bucks County.	2035M
264	US 202 at PA 100	Establishment of two southbound and two northbound lanes at the US 202 and High Street (US 322 Business) Interchange and additional eastbound left turn lane on Matlack to US 202 northbound.	2045M
401	Delaware River Joint Toll Bridge Commission All Electronic Tolling-Multiple Bridges	Design and construction of implementing All Electronic Tolling at Trenton-Morrisville (US 1).	2035M
402	PA Turnpike Reconstruction & Widening - milepost 324-326	Total reconstruction and widening between the Valley Forge Road overpass and the Valley Forge interchange, Chester and Montgomery counties.	2025M
403	I-95 at PA Turnpike Interchange - Stage 3 - Replacement of the Delaware River Bridge	Includes the complete replacement of the Delaware River Bridge and the reconstruction of the approach roadways.	2045M
407	PA Turnpike Reconstruction & Widening - milepost 312-319	Total reconstruction and widening from four to six lanes of eight miles of the PA Turnpike (I-76) from just west of the Downingtown interchange to the Route 29 interchange in Chester County.	2025M
408	HILCO S. Philly Refinery Site Redevelopment	Reconfiguration of circulation paths and patterns, including signalization and possible new roadways at HILCO development site.	2035M
416	Collegeville Road Safety Improvements/ Multiuse Trail	The proposed project will widen PA 29/Collegeville Road from two-lanes to four-lanes; will add turn lanes and signalization/crosswalk at the Hopwood Road intersection and will build a multiuse trail extension from the intersection to Perkiomen Trail.	2035M
423	Perkiomen Crossing (Phase 1)	Ridge/Germantown intersection realignment to the east to improve safety and mobility before Phase 2 (MRP 160) can be funded. Included in conformity under MPMS 102273.	2035M

MRP ID	Project Title	Improvements	AQ Analysis Code
<b>Transit</b>			
CF	Franklin Square Station	New station on PATCO Line in Philadelphia.	2025M

Source: DVRPC, 2024

**New Air Quality Significant Pennsylvania Connections 2050 Long-Range Plan MRPs**

MRP ID	Project Name	Improvements	AQ Code
<b>Highway</b>			
188A	US 1 (Roosevelt Boulevard) Operational Improvements - Phase 1	Intersection and roadway improvements along US 1 from Broad Street to Adams Avenue and from Adams Avenue to Old Lincoln Highway. Included in conformity under MPMS 119822 and 119836.	2035M
217	PA 100 at Exton Station	Additional northbound lane between Pottstown Pike on-ramp and the US 30 Exton bypass. Included in conformity under MPMS 118025.	2035M
423	Perkiomen Crossing (Phase 1)	Ridge/Germantown intersection realignment to the east to improve safety and mobility before Phase 2 (MRP 160) can be funded. Included in conformity under MPMS 102273.	2035M

Source: DVRPC, 2024

*Note: AQ Codes for Long-Range Plan projects indicate when the project is expected to be complete. Phases of these projects are often programmed in the TIP as breakout projects. These phases are analyzed for conformity when the breakout project is expected to open to traffic.*

**Air Quality Significant Projects in the FY2025 TIP for Pennsylvania**

MPMS Number	Project Title	AQ Analysis Code
<b>Highway</b>		
<b>Bucks County</b>		
12923	Bristol Road Extension	2035M
13549	US 1 (Bridges) Design (Section 03S) SR:0001	2025M
93445	Route 1 Improvement-North (Section RC2)	2035M
99431	Route 663 (John Fries Highway) Widening	2045M
110309	I-95/US 13/PA 132 Slip Ramp Operation Improvement	2035M
110310	Almshouse at Jacksonville Road Roundabout	2035M
115418	Route 113 and Minsi Trail Road Roundabout	2035M
115419	US 202 & York Road Roundabout	2035M
118020	Bustleton Pike/Second Street Pike Roundabout	2035M
118022	US 202 and Route 179 Roundabout	2035M
<b>Chester County</b>		
14532	US 30, Coatesville Downingtown Bypass Reconstruction Design SR:0030	2045M
87781	US 30, Coatesville Downingtown Bypass (CER-Eastern Section)	2045M
102708	PA 41 at PA 841 Improvements	2035M
107553	US 30 and Airport Road Interchange Improvement	2045M
118025	PA 100 Northbound at Exton Station	2035M
118552	Harvey's Bridge Road over West Bridge Brandywine Creek	2035M

MPMS Number	Project Title	AQ Analysis Code
<b>Delaware County</b>		
15477	I-95/ US 322/Conchester Highway Interchange Improvements	2035M
69817	US 322, Featherbed Lane to I-95 (Section 102)	2045M
79329	Bridgewater Road Extension	2035M
95429	US 202 and US 1 Intersection Area Improvements	2030M
104821	I-476 Travel Management	2030M
107642	Smithbridge Road Corridor	2035M
110951	MacDade Boulevard Corridor Safety Improvements	2030M
111022	Chichester Avenue Safety Corridor Improvements	2030M
114034	US 322, Chelsea Parkway to Market Street Interchange (Section 103)	2035M
114102	West Chester Pike and I-476	2030M
114112	Media Bypass ITS (Competitive CMAQ)	2030M
115427	Lansdowne Avenue Corridor Safety Improvements	2030M
118029	Bethel Roundabout	2035M
119435	PA 452/I-95 Improvements	2035M
119917	Concord Road / Bethel Road / Engle Street Intersection Improvement (Sec DBE)	2035M
120688	SR 3007 Sec DMB Preliminary Design for Concord Road / McDonald Boulevard and Concord Road/Sunfield Drive Intersection Improvements	2035M
<b>Montgomery County</b>		
16438	PA 309 Connector Project - Phase I	2045M
16577	Ridge Pike: Harmon Road to Crescent Avenue	2035M
48172	PA 23, Moore to Allendale and Trout Creek Road Bridge	2035M
48174	PA 63, PA 152, Norristown Road at Maple Glen Triangle	2035M
48175	Ridge Pike: Belvoir Road to Chemical Road	2035M
48187	Henderson/Gulph Road Widen near I-76 Ramps	2045M
57176	PA 611 Bridge over PA Turnpike Willow Grove Interchange Ramps	2045M
63486	US 202, Johnson Highway to Township Line Road (61S)	2035M
64795	Belmont Road/Rock Hill Road Widening: I-76 Ramps to Rock Hill Road	2045M
102273	Ridge Pike and Germantown Pike Realignment	2035M
105803	PA 309 Connector: Souderton Pike to PA 309 (HT3)	2035M
106662	I-76 Integrated Corridor Management	2035M
110971	Main Street Safety Improvements	2035M
115429	Belmont Avenue and Saint Asaph's Road Roundabout	2035M
116838	I-76 Flex Lanes: US 202 to I-476 SR:0076	2035M
116839	I-76 Flex Lane WB: US 1-Belmont Ave SR:0076	2035M
118032	Dekalb Street Two-Way Reconstruction	2035M
<b>Philadelphia County</b>		
17821	I-95, Shackamaxon Street to Ann Street (GIR)	2035M
47811	Bridge Street Design (Section BSR) (IMP) SR:0095	2035M
47812	I-95, Betsy Ross Interchange (BRI)—Design (IMP)	2035M
47813	I-95, Ann Street to Wheatsheaf Lane (AFC)	2035M
79828	I-95, Race to Shackamaxon (GR5)	2035M
79905	I-95, Betsy Ross Mainline (BR3)	2035M
79910	I-95, Margaret to Kennedy (Section BS2)	2035M
87784	Aramingo/Harbison: Church Street to Amtrak (Section BS3)	2045M
96223	Philadelphia Signal Retiming	2035M
103553	I-95, Southbound: Race to Shackamaxon (Section GR6)	2035M

MPMS Number	Project Title	AQ Analysis Code
103557	I-95, Ann Street to Wheatsheaf Lane (Section AF3)	2035M
103558	I-95, Southbound: Ann Street to Wheatsheaf Lane (Section AF4)	2035M
103559	I-95, Betsy Ross Mainline Southbound (Section BR4)	2035M
103563	I-95, Delaware Avenue Extension (Section BS5)	2035M
110958	Castor Avenue Roundabout	2035M
115434	Frankford Avenue Corridor Safety Improvements	2035M
115435	63rd Street Corridor Safety Improvements	2035M
115440	Washington Lane Corridor Safety Improvements	2035M
115687	I-95, Allegheny & Castor Avenue Interchanges	2025M
118035	Fifth Street Improvements	2035M
119822	US 1 (Roosevelt Boulevard) Operational Improvements - Phase 1	2035M
119836	US 1: Adams Avenue - Old Lincoln Highway	2035M
<b>Transit</b>		
60540	Regional Parking Improvements	2035M
77183	Transit and Regional Rail Station Program	2035M
93586	Downingtown Train Station Rehabilitation	2035M
115472	Projects of Significance	2035M

Source: DVRPC, 2024

#### Air Quality Significant Projects in the Delaware County PM<sub>2.5</sub> Networks

MPMS Number	Project Title	AQ Analysis Code
<b>Highway</b>		
95429	US 202 and US 1 Intersection Area Improvements	2030M
104821	I-476 Travel Management	2030M
110951	MacDade Boulevard Corridor Safety Improvements	2030M
111022	Chichester Avenue Corridor Safety Improvements	2025M
114102	West Chester Pike and I-476	2030M
114112	Media Bypass ITS	2030M
115427	Lansdowne Avenue Corridor Safety Improvements	2030M

Source: DVRPC, 2024

#### New Air Quality Significant Projects in the FY2025 Pennsylvania TIP

MPMS Number	Project Title	AQ Analysis Code
<b>Highway</b>		
<b>Bucks County</b>		
99431	Route 663 (John Frieds Highway) Widening	2045M
<b>Delaware County</b>		
119917	Concord Road / Bethel Road / Engle Street Intersection Improvement	2035M
119435	PA 452/I-95 Improvements	2035M
120688	Concord Roundabouts	2035M
<b>Montgomery County</b>		
57176	PA 611 Bridge over PA Turnpike Willow Grove Interchange Ramps	2045M
116838	I-76 Flex Lanes: US 202 to I-476 SR:0076	2035M
116839	I-76 Flex Lane WB: US 1-Belmont Avenue SR:0076	2035M



**Philadelphia County**

<b>119822</b>	US 1 (Roosevelt Boulevard) Operational Improvements - Phase 1	2035M
<b>119836</b>	US 1: Adams Avenue - Old Lincoln Highway	2035M

Source: DVRPC, 2024

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# Transportation Conformity Demonstration

*Connections 2050* Long-Range Plan and FY2025 TIP for Pennsylvania

**Publication Number:** 24147

**Date Published:** July 2024

**Geographic Area Covered:**

The nine-county DVRPC planning area, which covers the counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.

**Key Words:**

Air Quality, *Connections 2050* Long-Range Plan, Multijurisdictional Nonattainment Area, National Ambient Air Quality Standards, Nonattainment Area, NO<sub>x</sub>, Ozone, State Implementation Plan (SIP), Transportation Conformity, Transportation Improvement Program (TIP), Volatile Organic Compounds (VOCs).

**Abstract:**

The Delaware Valley Regional Planning Commission (DVRPC) demonstrates transportation conformity of its *Connections 2050* Long-Range Plan and FY2025 TIP for Pennsylvania. A transportation conformity demonstration is required at least once every four years or when a metropolitan planning organization: (1) adopts a new Plan or TIP; or (2) amends, adds, or deletes a regionally significant, nonexempt project in a Plan or TIP. This conformity finding of the DVRPC Plan and TIP for Pennsylvania shows that they meet the National Ambient Air Quality Standards requirements governing ozone and fine particulate matter. This conformity finding reflects all amendments to the Plan and TIPs through April 2024.

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**Staff Contact:**

Sean Greene  
Manager, Office of Freight and Clean  
Transportation  
(215) 238-2860  
sgreene@dvrpc.org



190 N Independence Mall West  
8th Floor  
Philadelphia, PA 19106-1520  
215.592.1800 | fax: 215.592.9125  
[www.dvrpc.org](http://www.dvrpc.org)

**DVRPC's vision** for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

**DVRPC's mission** is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.



190 N Independence Mall West  
8th Floor  
Philadelphia, PA 19106-1520  
215.592.1800  
[www.dvrpc.org](http://www.dvrpc.org)

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