# Transportation Conformity Demonstration:

## *Connections 2050* Long-Range Plan and FY2023 Pennsylvania TIP

*July 2022*

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION


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# Executive Summary

**Where is Transportation Conformity required?**

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

**Maintenance Area:** 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 a new Fiscal Year (FY) 2023 TIP for Pennsylvania.

The Delaware Valley Regional Planning Commission (DVRPC) region includes a complex combination of nonattainment and maintenance areas for ozone and fine particulate matter ($PM_{2.5}$). The region's ozone nonattainment area encompasses the entire nine-county DVRPC region, while the $PM_{2.5}$ 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 transportation conformity demonstration shows that the *Connections 2050* Long-Range Plan and Draft FY2023–2026 Pennsylvania TIP are following, or "conforming to", the State Implementation Plans (SIPs) to meet the NAAQS. Since there are no changes to regionally significant and nonexempt projects in the FY2022 TIP for New Jersey or Plan projects in the New Jersey portion of the DVRPC region, DVRPC is not required to demonstrate transportation conformity for projects in the New Jersey portion of the region.

This Executive Summary highlights DVRPC's conformity demonstration for:

**Volatile Organic Compounds (VOCs) and Nitrogen Oxides ($NO_x$) 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 $PM_{2.5}$ and precursor $NO_x$ meeting the 1997 Annual, 2006 24-Hour, and 2012 Annual $PM_{2.5}$ NAAQS requirements in:**

- the DVRPC portion of the Philadelphia–Wilmington, PA–NJ–DE Annual and 24-Hour $PM_{2.5}$ Maintenance Area, and
- the Delaware County, PA Annual $PM_{2.5}$ 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.

## 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 (US EPA)-approved emissions modeling system. DVRPC uses the Motor Vehicle Emissions Simulator 2014b (MOVES 2014b) emissions model to demonstrate transportation conformity in order to meet this requirement.

### Conformity Test

Modeled emissions results from the projects in the Plan and TIP 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.

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 US 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 $NO_x$. The additional Delaware County $PM_{2.5}$ analysis year 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 | $PM_{2.5}$ | Note |
|---|---|---|---|
| 2025 | √ | √ | Interim Year and $PM_{2.5}$ SIP budget year |
| 2030 | | √ | $PM_{2.5}$ 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, 2022.*

## Findings

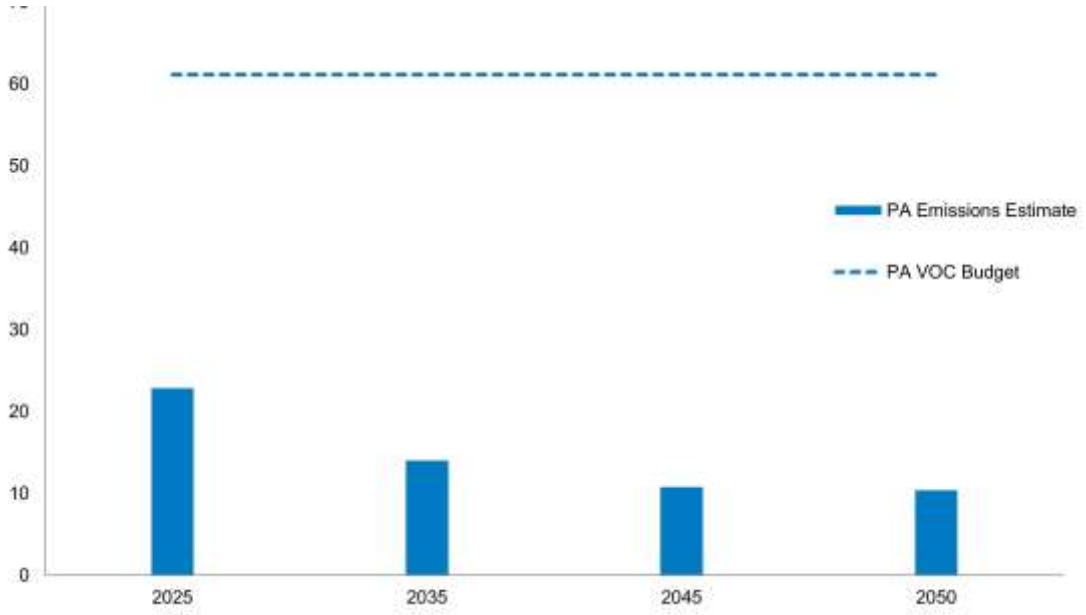
The DVRPC Plan and the TIP are found to be in conformity with the current Pennsylvania SIPs under the CAA. The forecasted emissions levels of VOCs, $NO_x$, and $PM_{2.5}$ do not exceed the respective budgets established by the Pennsylvania Department of Environmental Protection (PA DEP) in accordance 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) [40 CFR 93.113]; and
- that the Plan and the TIP are consistent with the MVEBs in the applicable SIPs [40 CFR 93.118].

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.

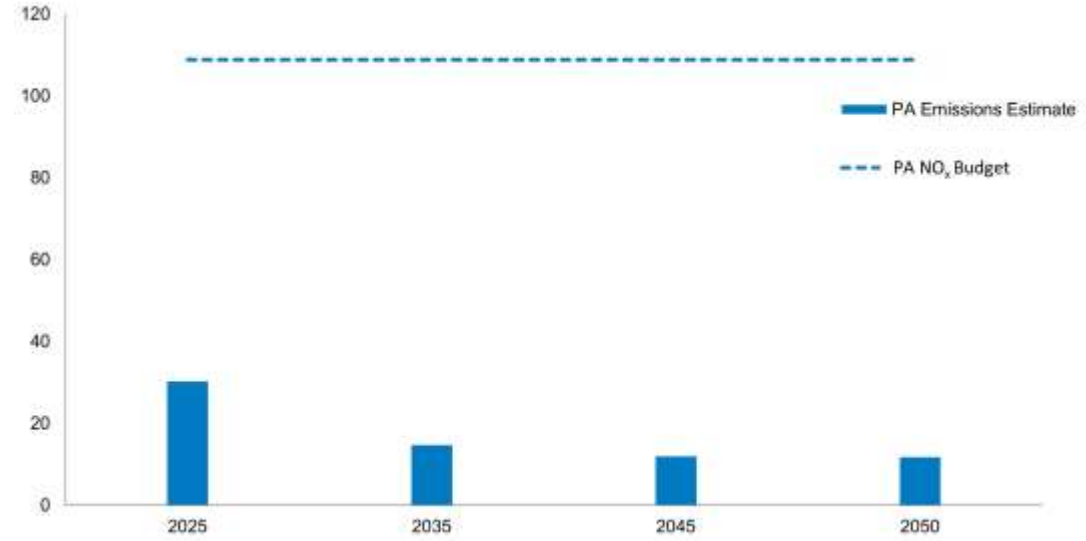
**Figure 1:** VOCs Emissions Analysis Results (Tons/Day)




*Source: DVRPC, 2022.*

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

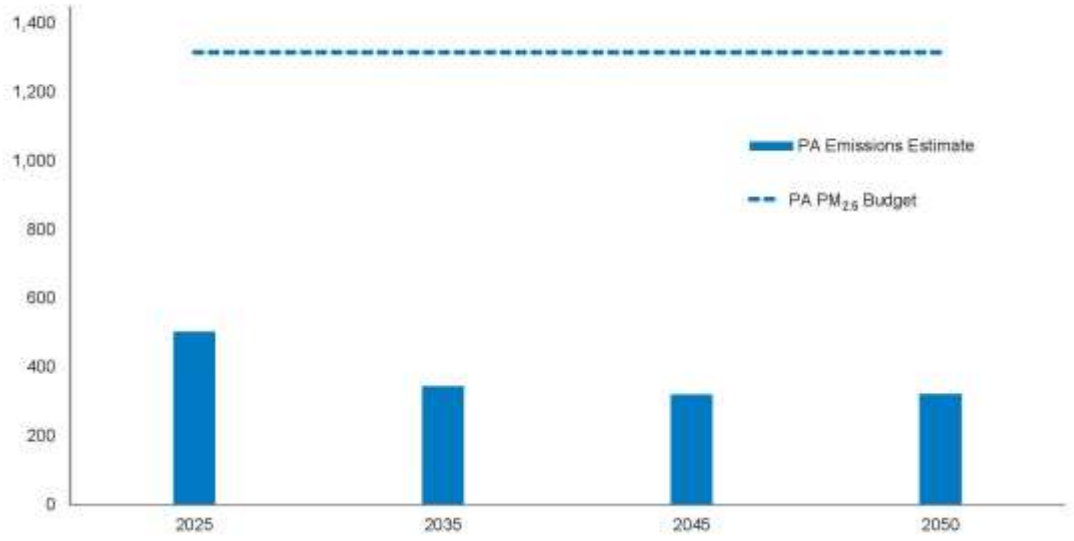
**Figure 2:** $NO_x$ Emissions Analysis Results (Tons/Day)




*Source: DVRPC, 2022.*

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

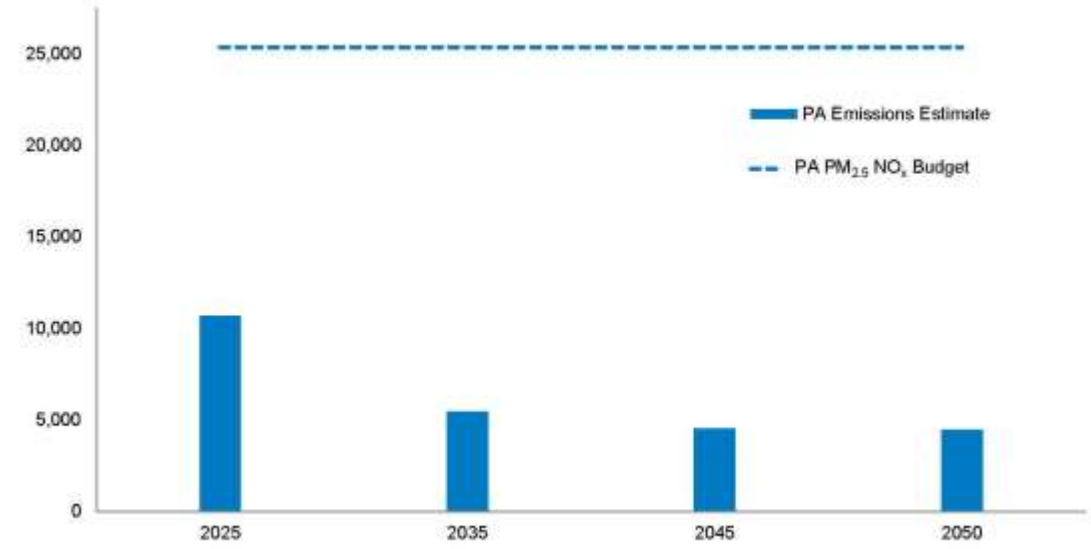
**Figure 3:** Annual and 24-Hour Direct $PM_{2.5}$ Emissions Analysis Results (Tons/Year)




*Source: DVRPC, 2022.*

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

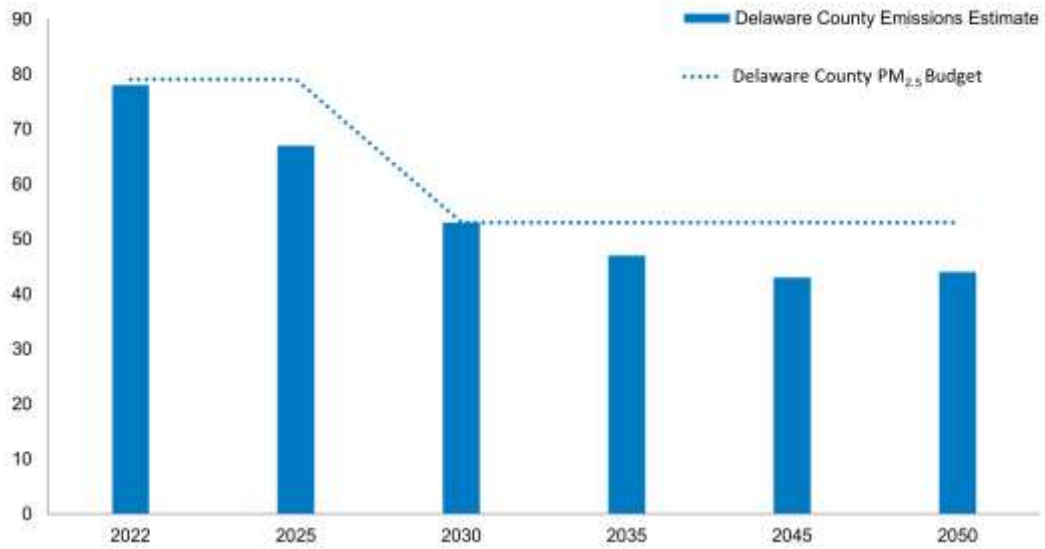
**Figure 4:** Annual and 24-Hour $NO_x$ Precursor Emissions Analysis Results (Tons/Year)




*Source: DVRPC, 2022.*

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

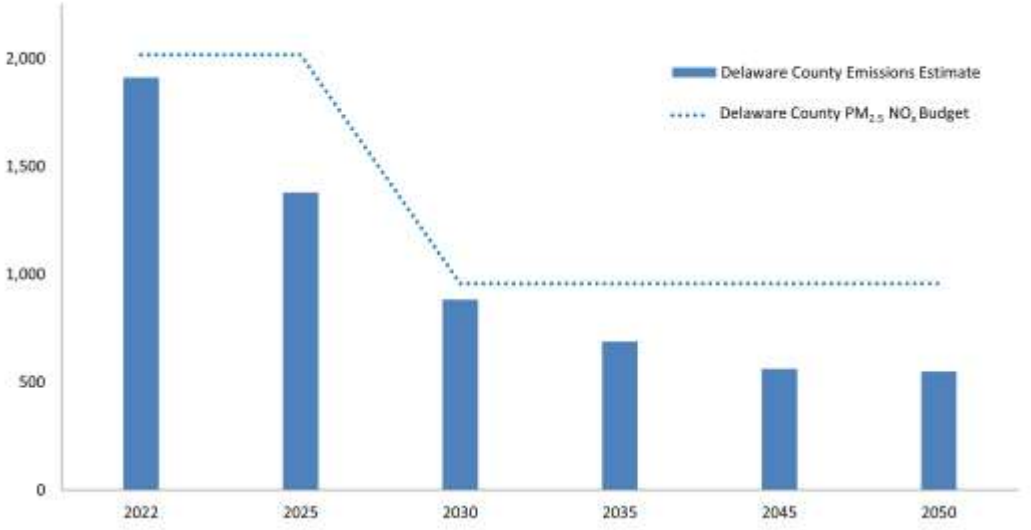
**Figure 5:** Delaware County Annual Direct $PM_{2.5}$ Emissions Analysis Results (Tons/Year)




*Source: DVRPC, 2022.*

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

**Figure 6:** Delaware County Annual $NO_x$ Precursor Emissions Analysis Results (Tons/Year)




*Source: DVRPC, 2022.*

The most recent MVEBs apply to all future analysis years.

These findings demonstrate transportation conformity of the DVRPC *Connections 2050* Long-Range Plan and FY2023 Pennsylvania TIP 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 1997 Annual and 2006 24-Hour $PM_{2.5}$ NAAQS in the Philadelphia–Wilmington, PA–NJ–DE $PM_{2.5}$ Maintenance Area; and
- the 2012 Annual $PM_{2.5}$ Delaware County, Maintenance Area.

# CHAPTER 1: Introduction

## Overview

This report documents the demonstration of transportation conformity for the DVRPC *Connections 2050* Long-Range Plan and FY2023 Pennsylvania TIP with the respective SIPs and applicable NAAQS requirements under the CAA, as amended.

This report documents transportation conformity for the following specific pollutants within the stated designation areas. Those pollutants are:

**VOCs and $NO_x$ meeting the 1997, 2008, and 2015 Eight-Hour Ozone NAAQS requirements in:**

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

**Direct $PM_{2.5}$ and precursor $NO_x$ meeting the 1997 Annual, 2006 24-Hour, and 2012 Annual $PM_{2.5}$ NAAQS requirements in:**

- the DVRPC portion of the Philadelphia–Wilmington, PA–NJ–DE Annual and 24-Hour $PM_{2.5}$ Maintenance Area, and
- the Delaware County, PA Annual $PM_{2.5}$ Maintenance Area.

In July 2013, the US 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 US 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.

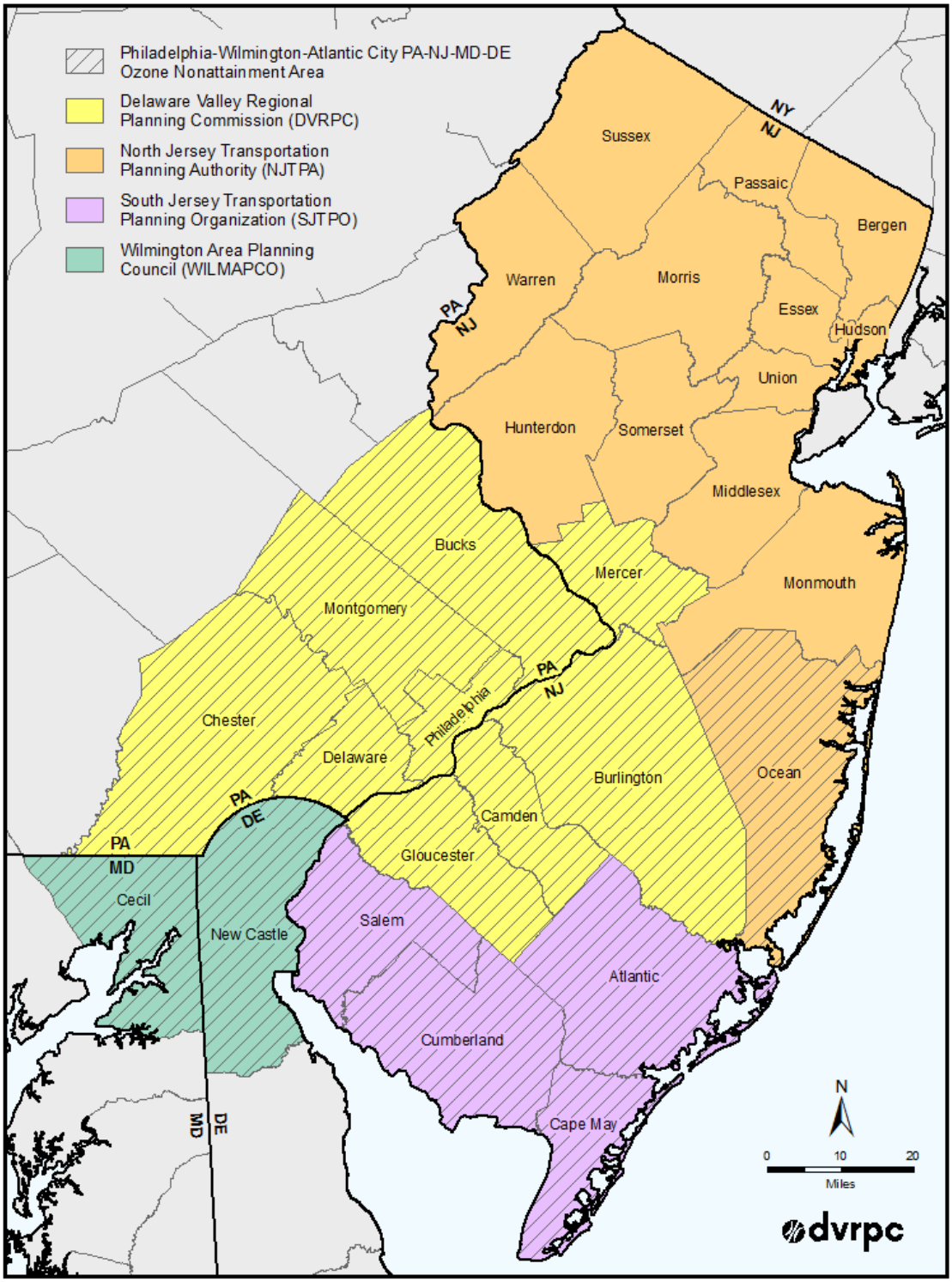
On August 24, 2016, the US EPA revoked the 1997 Annual $PM_{2.5}$ Standard. The DVRPC region was in maintenance of this standard and although DVRPC is not required to demonstrate conformity to this standard due to this action, DVRPC is affirming that this conformity finding does also demonstrate transportation conformity to the revoked 1997 $PM_{2.5}$ NAAQs, as well as to the 2006 and 2012 $PM_{2.5}$ NAAQs.

The DVRPC planning area also includes former carbon monoxide (CO) maintenance areas for portions of the cities of Philadelphia, Pennsylvania. This area has achieved its 20-year maintenance plan (December 4, 2017) and is longer required to demonstrate conformity for CO.[1]

Figures 7 and 8 detail the current ozone and $PM_{2.5}$ nonattainment and maintenance areas that are relevant to the DVRPC region.

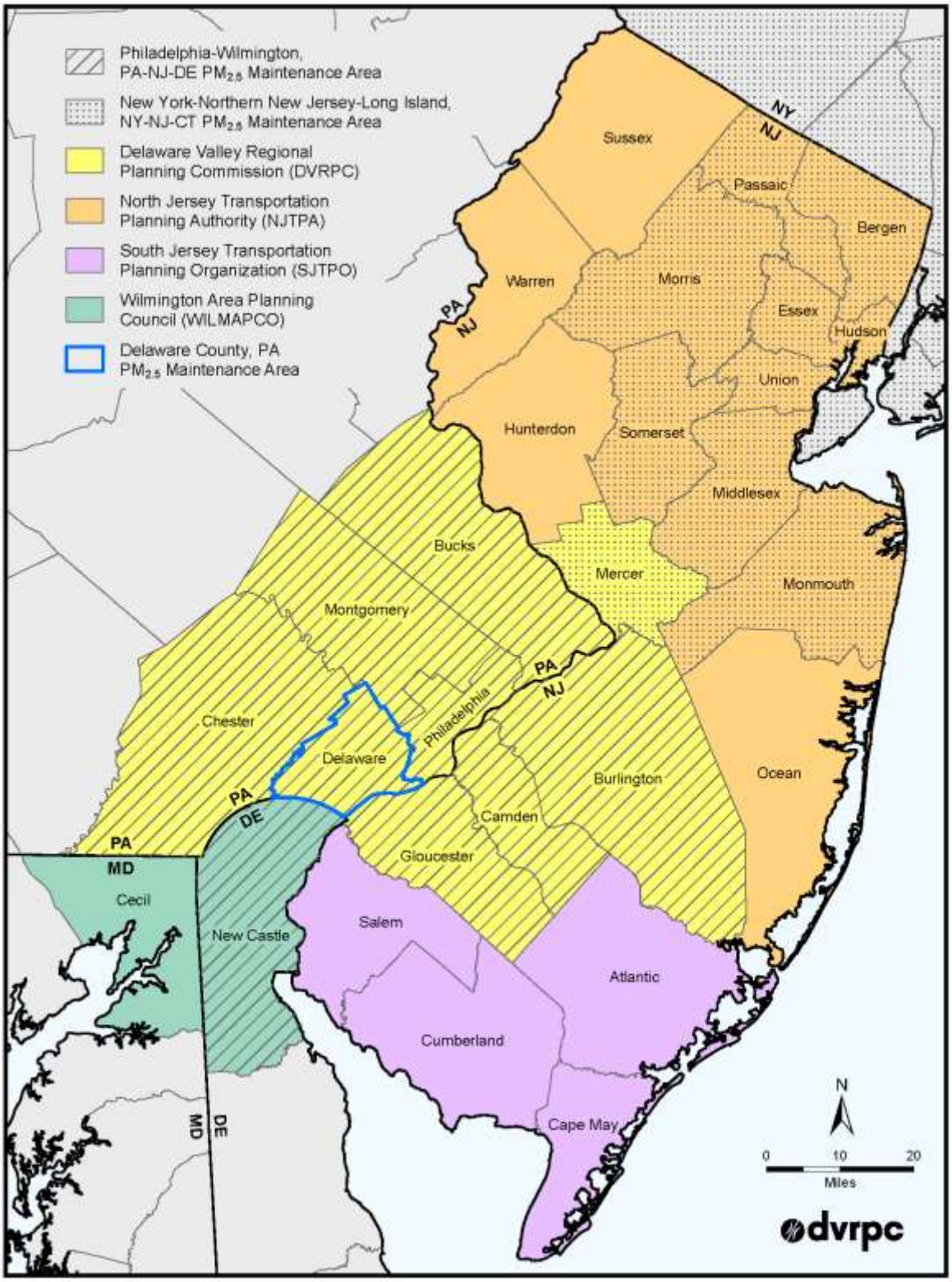
[1] *Transportation Conformity Guidance for Areas Reaching the End of the Maintenance Period*, EPA-420-B-14-093

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




*Source: DVRPC, 2022*

**Figure 8:** DVRPC Annual and 24-Hour $PM_{2.5}$ Maintenance Areas




*Source: DVRPC, 2022*

## NAAQS

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

The US EPA has set NAAQS for several principal air pollutants, which are called criteria pollutants. The NAAQS criteria pollutants include ozone, CO, coarse and fine particulate matter ($PM_{10}$ and $PM_{2.5}$, respectively), sulfur dioxide, nitrogen dioxide, and lead.

The DVRPC region must demonstrate transportation conformity for ozone and $PM_{2.5}$, and Table 2 lists the current NAAQS for ozone and $PM_{2.5}$ and the date of adoption by the US EPA.

**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 $PM_{2.5}$ (2012) | 12 µg/$m^3$ | December 2012 | April 2015 | 78 FR 3086 |
| 24-Hour $PM_{2.5}$ (2006) | 35 µg/$m^3$ | October 2006 | December 2009 | 71 FR 61144 |

*Source: US EPA, 2022.*

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

When a region is designated as a nonattainment area by the US EPA, states are required to develop SIPs. The SIP represents the state's roadmap to meet or "attain" air quality standards contained in 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. Detailed information on the SIPs can be viewed at: 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 $NO_x$ 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 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 ($PM_{10}$), 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 ($PM_{2.5}$), are believed to pose even greater health risks. Because of their small size, these fine particles can lodge deep in the lungs. Individuals particularly sensitive to $PM_{2.5}$ exposure include older adults, people with heart and lung disease, and children. Health studies have shown a significant association between exposure to $PM_{2.5}$ and premature mortality.

$PM_{2.5}$ can be emitted directly from combustion engines or chemically formed in the atmosphere when certain gases are present. Direct $PM_{2.5}$ emissions can result from particles in exhaust fumes, from brake and tire wear, from road dust kicked up by vehicles, and from highway and transit construction. Indirect $PM_{2.5}$ emissions can result from one or more of several exhaust components, including VOCs, $NO_x$, sulfur oxides ($SO_x$), and ammonia ($NH_3$).

## 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 are consulting 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 US 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; or when an MPO amends, adds, or deletes a regionally significant, nonexempt project in a Plan or TIP.

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, and applies to ozone and $PM_{2.5}$. 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.

# CHAPTER 2: Conformity Demonstration Overview

## DVRPC Plan and TIP

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 articulates a vision and a comprehensive long-range transportation blueprint for the DVRPC planning area. The *Connections 2050* Long-Range Plan includes over $67 billion from traditional sources for regional transportation improvements. The Plan is fiscally constrained and focuses transportation funding on rebuilding the region's transportation infrastructure, but it also includes new major regional transportation projects to achieve its goals and objectives. The Plan advances and supports the region's land use plans and policies and proposes strategies to carry out those policies.

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).

The Plan's financial component reflects current and projected federal authorization levels. Projected costs for future 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.[2]

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

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

[2] See 23 CFR 450.216(1), 23CFR 450.322(f) (10) (iv), and 23 CFR 450.23(h).

The project set includes all those projects in the Plan, 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

For all Plan and TIP projects, an AQ coding scheme has been developed and is applied by DVRPC for the conformity determination and exempt eligibility identification purposes. 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.

**Table 3:** AQ Codes for Projects in the Plan and TIP

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

*Source: DVRPC, 2022.*

†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 ($PM_{2.5}$ SIP budget year) and 2050 (the Plan horizon year) are required analysis years, and 2035 and 2045 are interim years within 10 years of the previous analysis.

In November 2019, the US EPA approved an Attainment SIP for the Delaware County $PM_{2.5}$ Nonattainment Area. This SIP included MVEBs for 2022 and 2030; therefore, since 2022 has passed 2030 is an additional required analysis year for $PM_{2.5}$ for projects in Delaware County only.

**Table 4:** Mobile Source Analysis Years

| Year | Ozone | $PM_{2.5}$ | Note |
|---|---|---|---|
| 2025 | √ | √ | Interim Year and $PM_{2.5}$ SIP budget year |
| 2030 | | √ | $PM_{2.5}$ SIP budget year (Delaware County only) |
| 2035 | √ | √ | Year within 10 years of previous analysis |
| 2045 | √ | √ | Year within 10 years of previous analysis |

*Source: DVRPC, 2022.*

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 ($PM_{2.5}$ budget year and interim year) | All regionally significant highway and transit facilities, services, and activities currently in place<br>and<br>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<br>and<br>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<br>and<br>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<br>and<br>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<br>and<br>Additional highway and transit projects that are scheduled to open from 2045 to 2049 |

*Source: DVRPC, 2022.*

## 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 (TIM 2.3). 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 2014b. 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 SIP MVEBs 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 US 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.

The Pennsylvania Department of Transportation (PennDOT) updates many of the key planning assumptions on a triennial basis to support the US 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 Working Group (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, although in most cases these had not been updated with data from the COVID-19 period. In addition, PennDOT, in consultation with the TCICG, 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. For both cases, the VMT growth and vehicle age assumptions relied on previous planning assumptions used for past conformity analyses.

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 US EPA's technical guidance. This includes information and characteristics related to fuels, inspection maintenance program parameters, heavy-truck long duration idling, and environmental data (e.g., temperature 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 May 10, 2022. This date functions 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 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 2015 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 2015 dollars | Specified in the transit networks 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, 2022.*

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

### Travel Demand Simulation

TIM 2.3 was validated in 2017 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 on 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 2014b. The TCICG has reviewed and approved DVRPC's travel demand modeling process.

### Emissions Model

The CAA requires the US EPA to regularly update emissions models. In 2009, the US 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 October 2016, MPOs and state DOTs were required to use the MOVES 2014 emissions model to demonstrate transportation conformity; MOVES 2014 has subsequently been updated to the MOVES 2014b emissions model that is used for this conformity determination. For a detailed description of the MOVES model, please visit: www.epa.gov/moves.

## Conformity Tests

DVRPC uses the applicable SIP budgets to demonstrate conformity for ozone and $PM_{2.5}$.

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 US EPA in December 2018, and this conformity determination was conducted following the 2015 Eight-Hour Ozone NAAQS implementation guidance (83 FR 62988).

DVRPC is using the 2008 Ozone SIP Budget which was approved by the US EPA for conformity purposes in February 2011. The ozone budgets were developed by PA DEP using MOBILE 6.2, and the regional emissions analysis for ozone was conducted using MOVES 2014b. Ozone emissions analysis is conducted for a typical summer work weekday.

The US EPA has approved maintenance plans for both the 1997 Annual and 2006 24-Hour $PM_{2.5}$ standards in the DVRPC region (approved by the US EPA in April 2015). The US EPA approved a maintenance plan for the 2012 Annual $PM_{2.5}$ standard in Delaware County in November 2019. The state SIPs contain MVEBs for direct $PM_{2.5}$ and precursor $NO_x$ to be used to demonstrate transportation conformity. All $PM_{2.5}$ MVEBs are expressed in tons of emissions per year for both the annual and 24-hour standards.

The US EPA has ruled that exhaust and brake/tire wear must be included in the regional analysis of direct $PM_{2.5}$ 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 $PM_{2.5}$ emissions in this DVRPC conformity iteration are tailpipe exhaust and brake/tire wear.

For the indirect $PM_{2.5}$ emissions (also called $PM_{2.5}$ precursors), the US EPA has identified four potential transportation-related $PM_{2.5}$ precursors: VOCs, $NO_x$, $SO_x$, and $NH_3$. The PA DEP has determined that $NO_x$ is contributing to regional $PM_{2.5}$ formation and therefore must be included in the $PM_{2.5}$ precursor analysis.

Tables 7–9 show 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 (tons per day) | 61.09 (all counties) |
| $NO_x$ | 2008 Budget (tons per day) | 108.78 (all counties) |

*Source: DVRPC, 2022.*

*†Ozone budgets are reported to the second decimal in accordance with the SIP. Both state SIP budgets for ozone are for a typical July weekday.*

**Table 8:** Pennsylvania $PM_{2.5}$ Emissions Budgets (Tons/Year)

| Pollutant | Budget† | Pennsylvania Subregion (tons/year) |
|---|---|---|
| Annual and 24-Hour Direct $PM_{2.5}$♦ | 2017 Budget (tons per year) | 1,679 |
| Annual and 24-Hour Precursor $NO_x$♦ | | 37,922 |
| Annual and 24-Hour Direct $PM_{2.5}$♦ | 2025 Budget (tons per year) | 1,316 |
| Annual and 24-Hour Precursor $NO_x$♦ | | 25,361 |

*Source: DVRPC, 2022.*

*†$PM_{2.5}$ budgets are rounded off to the nearest integer in accordance with the SIP.*
*♦Both state SIP budgets for Annual and 24-Hour $PM_{2.5}$ are the same value expressed in tons/year.*

**Table 9:** Delaware County $PM_{2.5}$ Emissions Budgets (Tons/Year)

| Pollutant | Budget† | Pennsylvania Subregion (tons/year) |
|---|---|---|
| Annual and 24-Hour Direct $PM_{2.5}$♦ in Delaware County PA only. | 2022 Budget (tons per year) | 79 |
| Annual and 24-Hour Precursor $NO_x$♦ in Delaware County PA only | | 2,016 |
| Annual and 24-Hour Direct $PM_{2.5}$♦ in Delaware County PA only. | 2030 Budget (tons per year) | 53 |
| Annual and 24-Hour Precursor $NO_x$♦ in Delaware County PA only | | 956 |

*Source: DVRPC, 2022.*

*†$PM_{2.5}$ budgets are rounded off to the nearest integer in accordance with the SIP.*
*♦Both state SIP budgets for Annual and 24-Hour $PM_{2.5}$ are the same value expressed in tons/year.*

# CHAPTER 3: Regional Emissions Analysis

## Travel Demand Simulation Results

Quantitative analyses for this iteration of the transportation conformity determination for the DVRPC region began on May 10, 2022. 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 FY2023 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 2014b emissions analysis model. These input files are provided to the US EPA for review and are available upon request.

For ozone analysis, a second speed distribution is performed before being analyzed by the MOVES 2014b 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 $NO_x$ emissions estimates for a typical summer work weekday.

## Emissions Estimate Results

Mobile source emissions estimates are outputs of the MOVES 2014b model. The regional emissions analysis must meet all conformity tests in the Final Rule. Specifically, emissions of VOCs, $NO_x$, and $PM_{2.5}$ 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 MVEBs for the 1997 Ozone Standard are to be used to demonstrate conformity.

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

| | | 2008 SIP MVEB† | 2025 Emissions | 2035 Emissions | 2045 Emissions | 2050 Emissions |
|---|---|---|---|---|---|---|
| Pennsylvania | Emissions from MOVES 2014b | 61.09 | 22.87 | 14.03 | 10.76 | 10.37 |

*Source: DVRPC, 2022.*

*†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.*

**Table 11:** $NO_x$ Emissions Analysis Results (Tons/Day)

| | | 2008 SIP MVEB† | 2025 Emissions | 2035 Emissions | 2045 Emissions | 2050 Emissions |
|---|---|---|---|---|---|---|
| Pennsylvania | Emissions from MOVES 2014b | 108.78 | 30.20 | 14.69 | 11.9 | 11.69 |

*Source: DVRPC, 2022.*

*†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.*

Table 12 provides the emissions estimate results for the 2006 $PM_{2.5}$ maintenance areas, and Table 13 provides the emissions estimates and MVEB for the Delaware County 2012 Annual $PM_{2.5}$ Maintenance Area.

In Pennsylvania, governing SIP MVEBs for the years 2017 and 2025 were approved for both the Annual and 24-Hour $PM_{2.5}$ standards in April 2015. In Delaware County, Pennsylvania, governing SIP MVEBs were approved for the 2012 Annual $PM_{2.5}$ standard in November 2019.

Since the $PM_{2.5}$ 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 $PM_{2.5}$ and $NO_x$ Emissions Analysis Results (Tons/Year) for Pennsylvania

| | | 2025 SIP MVEB† | 2025 Emissions | 2035 Emissions | 2045 Emissions | 2050 Emissions |
|---|---|---|---|---|---|---|
| Direct $PM_{2.5}$ | DVRPC—PA | 1,316 | 502 | 344 | 320 | 322 |
| $PM_{2.5}$ Precursor ($NO_x$) | DVRPC—PA | 25,361 | 10,697 | 5,455 | 4,538 | 4,477 |

*Source: DVRPC, 2022.*

*†The most recent MVEBs apply to all future analysis years. All emissions are rounded to the nearest integer.*

**Table 13:** 2012 Annual Direct $PM_{2.5}$ and $NO_x$ Emissions Analysis Results (Tons/Year) for Delaware County, Pennsylvania

| | | 2022 SIP MVEB† | 2025 Emiss-ions | 2030 SIP MVEB | 2030 Emiss-ions | 2035 Emiss-ions | 2045 Emiss-ions | 2050 Emiss-ions |
|---|---|---|---|---|---|---|---|---|
| Direct $PM_{2.5}$ | Delaware County | 79 | 67 | 53 | 53⬩ | 47 | 43 | 44 |
| $PM_{2.5}$ Precursor ($NO_x$) | Delaware County | 2,016 | 502 | 956 | 891 | 688 | 562 | 550 |

*Source: DVRPC, 2022.*

*† Associated 2022 and 2030 MVEBs apply to all future analysis years. All emissions are rounded to the nearest integer.*
*⬩ Emissions analysis result is 52.8 tons/year, rounded to 53 tons/year according to the SIP requirements.*

## Meeting the Conformity Criteria

Collectively, these tables show that the estimated emissions of VOCs, $NO_x$, and $PM_{2.5}$ 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 TIP conform to the SIPs with respect to the MVEBs in the corresponding analysis year. The Plan and the TIP meet all requirements under the governing ozone and $PM_{2.5}$ regulations for all analysis years tested. The DVRPC region has satisfied the 20-year maintenance plan requirements for CO, and the region is no longer required to demonstrate conformity for this pollutant.

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

**Table 14:** Evaluation of the Plan, TIP, 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 time frame, 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 *Connections 2050* 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 TIP 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 test requirements met for all nonattainment and maintenance areas? | Yes. $PM_{2.5}$, VOCs, and $NO_x$ MVEBs have been approved by the US EPA. DVRPC performs budget tests to demonstrate the $PM_{2.5}$ 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 May 10, 2022, 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. |

*†Interagency consultation partners discussed and determined the best and latest available data to use to meet the latest planning assumptions, which led to some 2020 data being deemed unsuitable for this conformity analysis. Please see the planning assumption discussion on page 19 for a full explanation.*

<*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 2014b. |
| §93.112 | Did the MPO make the conformity determination according to the consultation procedures of the Final Rule or the state's conformity SIP? | Yes. Formal interagency consultation meetings with US 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.<br>In compliance with 23 CFR 450, a 30-day public comment period and a public meeting were held to receive comments regarding the transportation conformity of the Plan and the TIP under all governing NAAQS. |
| §93.113(b)<br>§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)<br>§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 using the Evans algorithm 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, 2022.*

# 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.

In Pennsylvania, consultation takes place at quarterly Air Quality Working Group meetings and through the PennDOT−hosted Share Point site, email, and phone discussions. Planning assumptions, model inputs, and project lists were discussed and approved for the DVRPC *Connections 2050* Long-Range Plan and FY2023 TIP for Pennsylvania through various email and phone conversations in April 2022. All comments approving the DVRPC conformity process were submitted to PennDOT by the TCICG by May 9, 2022.

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 US EPA Region III offices, FHWA PA Division Office, PA DEP, PennDOT, and SEPTA. 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 in Pennsylvania.

## Public Participation

DVRPC scheduled a mandated 30-day public comment period beginning on June 15, 2022, 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 five major newspapers throughout the region during the week of June 13, 2022. Announcement of the public comment period appeared in DVRPC's June newsletter, which goes to over 12,000 subscribers. This draft conformity document was made available online at www.dvrpc.org/AirQuality/Conformity/.

Hard copies of the Executive Summary of the draft document were made available at a number of large libraries throughout the region and at DVRPC's offices.

As part of the comment period, an online public information session was held on June 16, 2022, at 7:00 PM, via webinar and a call-in function. The meeting presentations were recorded and posted on the DVRPC website for additional access to the public. The comment period closed on July 18, 2022, at 5:00 PM.

DVRPC accepted public comments on the draft conformity document online at www.dvrpc.org/AirQuality/Conformity/, by email at airconformity@dvrpc.org; and by mail at the address at the end of this document, Attention: TIP/Plan/Conformity Comments. The DVRPC Board is scheduled to adopt the conformity findings on July 28, 2022.

## CHAPTER 5: Conclusion

The DVRPC Plan and FY2023 Pennsylvania TIP are found to be in conformity with the current Pennsylvania SIPs under the CAA. The forecasted emissions levels of VOCs, $NO_x$, and $PM_{2.5}$ 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 FY2023 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 1997 Annual and 2006 24-Hour $PM_{2.5}$ NAAQS in the Philadelphia–Wilmington, PA–NJ–DE $PM_{2.5}$ Maintenance Area; and
- the 2012 Annual $PM_{2.5}$ NAAQS in the Delaware County, PA, $PM_{2.5}$ Maintenance Area.

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# Appendix

## Appendix: Regionally Significant and Nonexempt Projects in the *Connections 2050* Long-Range Plan and FY2023 TIP in 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 *Connections 2050* Long-Range Plan Projects in Pennsylvania

| MRP ID | Project Name | Improvements | AQ Code |
|---|---|---|---|
| **Highway** | | | |
| **20** | I-95 and I-476 Ramps | One new lane in each direction on I-95 through the interchange. Addition of lane on ramp from SB I-476 to SB I-95. | 2035M |
| **32** | I-476 (PA Turnpike Northeast Extension) Widening | Reconstruct and widen to six lanes from Lansdale to Quakertown. | 2035M |
| **34** | County Line Road | Widen and reconstruct from PA 309 to PA 611. | 2035M |
| **35** | I-95 at PA Turnpike Interconnection | New partial interchange at I-276; widen Pennsylvania Turnpike from US 1 to New Jersey; widen I-95 from PA 413 to Pennsylvania Turnpike. | 2025M |
| **36** | I-95 at Scudders Falls Bridge Widening | Widen I-95 from PA 332 to the NJ 29 interchange. | 2025M |
| **37** | US 1 Widening | Reconstruct from I-276 (PA Turnpike) to NJ state line; widen from PA Turnpike to PA 413. | 2045M |
| **44** | US 1, Baltimore Pike | Selective widening from two lanes in each direction to three lanes in each direction and relocate the School House Road intersection. Add left-turn lanes on US 1 at School House Road and install new traffic signals. | 2025M |
| **48** | US 30/Coatesville-Downingtown Bypass (Western) | Reconstruct from PA 10 to just west of Reeceville Road with interchange improvements at PA 82, Airport Road, and Business 30 / PA 10.. | 2035M |
| **50** | US 322 | Widen and reconstruct from US 1 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. | 2035M |
| **56** | US 202 (Section 600) Widening | Widen and reconstruct from Johnson Highway to PA 309. | 2025M |
| **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 Street; interchange improvements at Vine, Girard, Allegheny, Betsy Ross Bridge, Bridge, and Cottman interchanges. | 2035M |
| **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. | 2045M |
| **111** | I-276 and Virginia Dr. | Add full movements. | 2035M |
| **112** | I-276 and Henderson Road | New interchange. | 2045M |
| **113** | I-276 and Lafayette Street/Ridge Avenue Ramp Modifications | New interchange. | 2035M |
| **114** | I-276 and PA 63 Welsh Road | New interchange. | 2045M |

| MRP ID | Project Name | Improvements | AQ Code |
|---|---|---|---|
| **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. | 2045M |
| **116** | PA 113 | Widen from US 30 to Peck Road. | 2045M |
| **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. | 2035M |
| **123** | US 202 and US 1 Loop Road | Complete southwestern loop road. | 2025M |
| **130** | I-476 Active Traffic Management | From PA 3 to I-95. | 2045M |
| **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 widen from just west of Reeceville Road to Quarry Road including six interchange projects. | 2035M |
| **158** | PA Turnpike | All-electronic tolling. | 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 |
| **185** | PA 611 / Easton Road | Corridor, interconnect signals, and intersection improvements between Blair Mill Road and County Line Road. | 2050M |
| **199** | PA 611 | Eastern Montgomery County intelligent transportation system (ITS) improvements and multimodal upgrades from Cheltenham Avenue to County Line Road (interconnect signals). | 2050M |
| **211** | Neshaminy Falls Interchange | New westbound half interchange at milepost 352.67 of PA Turnpike (I-76/I-276). | 2025M |
| **225** | 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. | 2025M |
| **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. | 2025M |
| **238** | PA 663 from Portzer to Hickory | Widen to four lanes between Portzer Road and Hickory Drive, including turn lanes; and construct eight-foot wide bike/pedestrian pathway. | 2025M |
| **240** | Spring House Road | Widen for additional through lane from Norristown Road to Sumneytown Pike. | 2025M |
| **244** | Horsham Road Widening | Widen to two through lanes in each direction from Limekiln Pike to Davis Grove. Widen | 2025M |

| MRP ID | Project Name | Improvements | AQ Code |
|---|---|---|---|
| | | Limekiln Pike to two through lanes at intersection with Horsham Road. | |
| **247** | Ashburn Road Extension | 0.34-mile extension to Township Line Road. | 2025M |
| **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. | 2025M |
| **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 |
| **404** | PA Turnpike Northeast Extension Reconstruction & Widening - milepost A43-A44 | Total reconstruction of the Quakertown interchange and reconstruction and widening of the PA Turnpike's Northeastern Extension (I-476) in the vicinity of the Quakertown interchange. | 2035M |
| **405** | PA Turnpike Reconstruction & Widening - milepost 298-312 | Reconstruct and widen the Mainline of the Turnpike from four to six lanes, extending from just east of Yoder Road to just east of PA 100 in Chester County. | 2035M |
| **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 |
| **409** | PA Turnpike Reconstruction & Widening - milepost 320-324 | Total reconstruction and widening between the Route 29 all-electronic interchange and the Valley Forge overpass, Chester County. | 2035M |
| | | | |
| **Transit** | | | |
| **P** | Media-Elwyn Line Rail Extension | Extend from Elwyn to Middletown, Pennsylvania. | 2025M |
| **Q** | Norristown High Speed Line King of Prussia Extension | Extend Norristown High Speed Line from Hughes Park to King of Prussia. | 2045M |
| **AF** | Amtrak Keystone Corridor Stations | Station enhancements at Parkesburg and Coatesville. | 2035M |
| **CF** | Franklin Square Station | New station on PATCO Line in Philadelphia. | 2025M |
| **CK** | Amtrak service at Chester Transportation Center | Reinstitute intercity services to Chester, Pennsylvania. | 2050M |
| **CS** | Connect Northeast Corridor | Rail transportation spine of the Northeast region, including capacity improvements throughout the Northeast Corridor; new right-of-way and station to directly serve Philadelphia Airport; new hub station at Baldwin/Chester. | 2050M |
| **414** | Amtrak Reading to Philadelphia | Restore Amtrak passenger train service from Reading to Philadelphia. | 2050M |

*Source: DVRPC, 2022.*

***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 FY2023 Pennsylvania TIP

| MPMS Number | Project Title | AQ Analysis Code |
|---|---|---|
| **Bucks County** | | |
| **12923** | Bristol Road Extension | 2035M |
| **13549** | US 1 (Bridges) Design (Section 03S) SR:0001 | 2025M |
| **93445** | Route 1 Improvement-North (Section RC2) | 2035M |
| **107794** | Langhorne Yardley Road at Woodbourne Road and Bridgetown Pike Intersection Improvements | 2035M |
| **110309** | I-95/US 13/PA 132 Slip Ramp Operation Improvement | 2035M |
| **110310** | Almshouse at Jacksonville Road Roundabout | 2035M |
| **111024** | Easton Road Roundabouts | 2025M |
| **115418** | Route 113 and Minsi Trail Road Roundabout | 2035M |
| **115419** | US 202 & York Rd Roundabout | 2035M |
| **115420** | Penndel Borough Intersection Improvements | 2035M |
| **118020** | Bustleton Pike/Second Street Pike Roundabout | 2035M |
| **118022** | US 202 and Route 179 Roundabout | 2035M |
| | | |
| **Chester County** | | |
| **14532** | US 30, Coatesville Downingtown Bypass Reconstruction Design SR:0030 | 2045M |
| **85949** | PA 896 Safety Improvement (Roundabout) | 2035M |
| **87781** | US 30, Coatesville Downingtown Bypass (CER-Eastern Section) | 2045M |
| **102708** | PA 41 at PA 841 Improvements | 2035M |
| **102709** | PA 41 & SR 926 Improvements | 2025M |
| **107553** | US 30 and Airport Road Interchange Improvement | 2045M |
| **110963** | Manor Road Roundabout | 2025M |
| **115422** | West Chester Pike Safety Improvements | 2035M |
| **115425** | High Street Pedestrian Improvements | 2025M |
| **118025** | PA 100 Northbound at Exton Station | 2035M |
| | | |
| **Delaware County** | | |
| **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 | 2025M |
| **110951** | Macdade Blvd. Corridor Safety Improvements | 2025M |
| **111022** | Chichester Avenue Safety Corridor Improvements | 2025M |
| **114034** | US 322, Chelsea Parkway to Market Street Interchange (Section 103) | 2035M |
| **114112** | Media Bypass ITS (Competitive CMAQ) | 2030M |
| **118029** | Bethel Roundabout | 2035M |
| **118030** | Bryn Mawr Avenue Extension | 2035M |
| | | |
| **Montgomery County** | | |
| **16334** | PA 73, Church Road Intersection and Signal Improvements | 2035M |
| **16577** | Ridge Pike: Harmon Road to Crescent Avenue | 2035M |
| **48172** | PA 23, Moore to Allendale and Trout Creek Road Bridge | 2035M |
| **48174** | PA 63, Welsh Road SR:0063 | 2035M |
| **48175** | Ridge Pike: Belvoir Road to Chemical Road | 2035M |
| **48187** | Henderson/Gulph Road Widen near I-76 Ramps | 2035M |
| **63486** | US 202, Johnson Highway to Township Line Road (61S) | 2035M |
| **63491** | US 202, Morris Road to Swedesford Road (65S) | 2025M |

| MPMS Number | Project Title | AQ Analysis Code |
|---|---|---|
| **Montgomery County** | | |
| **63493** | PA 309 Five-Points Intersection Improvements | 2035M |
| **64795** | Belmont Road/Rock Hill Road Widening: I-76 Ramps to Rock Hill Road | 2045M |
| **77211** | PA 309 Connector, Allentown Road to Souderton Pike (HT2) | 2035M |
| **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 |
| **111005** | Conshohocken Garage (I-76 ICM) | 2035M |
| **114944** | Bethlehem Pike Safety Improvements | 2035M |
| **115429** | Belmont Avenue and Saint Asaph's Road Roundabout | 2035M |
| **118032** | Dekalb Street Two-Way Reconstruction | 2035M |
| | | |
| **Philadelphia County** | | |
| **17697** | Island Avenue Signals | 2025M |
| **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 |
| **79827** | I-95, Southbound, Columbia to Ann Street N (GR4) | 2025M |
| **79828** | I-95, Race to Shackamaxon (GR5) | 2035M |
| **79905** | I-95, Betsy Ross Mainline (BR3) | 2035M |
| **79908** | I-95, Kennedy to Levick (Section BS1) | 2025M |
| **79910** | I-95, Margaret to Kennedy (Section BS2) | 2035M |
| **79912** | I-95, Allegheny Avenue and Castor Avenue Interchanges Connection (Section AF2) | 2025M |
| **103553** | I-95, Southbound: Race to Shackamaxon (Section GR6) | 2035M |
| **103555** | I-95, Corridor ITS (Section GR8) | 2035M |
| **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 |
| **106993** | Frankford Avenue Signal Improvements | 2025M |
| **110958** | Castor Avenue Roundabout | 2035M |
| **115431** | Veree Road Corridor Safety Improvements | 2025M |
| **115433** | Welsh Road Corridor Safety Improvements | 2025M |
| **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 |
| | | |
| **Transit** | | |
| **60540** | Regional Parking Improvements | 2035M |
| **60636** | Elwyn to Middletown Rail Restoration | 2025M |
| **77183** | Transit and Regional Rail Station Program | 2035M |
| **93586** | Downingtown Train Station Rehabilitation | 2035M |
| **115472** | Projects of Significance (includes SEPTA's Bus Revolution, Trolley Modernization, King of Prussia Rail extension, and railcar replacement projects) | 2035M |
| | | |

*Source: DVRPC, 2022.*

### New Air Quality Significant Projects in the Pennsylvania FY2023 TIP

| MPMS Number | Project Title | AQ Analysis Code |
|---|---|---|
| **Bucks County** | | |
| **118020** | Bustleton Pike/Second Street Pike Roundabout | 2035M |
| **118022** | US 202 and Route 179 Roundabout | 2035M |
| | | |
| **Chester County** | | |
| **118025** | PA 100 Northbound at Exton Station | 2035M |
| | | |
| **Delaware County** | | |
| **118029** | Bethel Roundabout | 2035M |
| **118030** | Bryn Mawr Avenue Extension | 2035M |
| | | |
| **Montgomery County** | | |
| **118032** | Dekalb Street Two-Way Reconstruction | 2035M |
| | | |
| **Philadelphia County** | | |
| **118035** | Fifth Street Improvements | 2035M |
| | | |

*Source: DVRPC, 2022.*

### Air Quality Significant Projects in the Delaware County $PM_{2.5}$ Networks

| MPMS Number | Project Title | AQ Analysis Code |
|---|---|---|
| **60636** | Elwyn to Middletown Service Restoration | 2025M |
| **107642** | Smithbridge Road Corridor | 2025M |
| **110951** | Macdade Boulevard Corridor Safety Improvements | 2025M |
| **111022** | Chichester Avenue Corridor Safety Improvements | 2025M |
| **95429** | US 202 and US 1 Intersection Area Improvements | 2030M |
| **104821** | I-476 Travel Management | 2030M |
| **114112** | Media Bypass ITS | 2030M |

*Source: DVRPC, 2022.*

# Transportation Conformity Demonstration

*Connections 2050* Long-Range Plan and FY2023 Pennsylvania TIP

**Publication Number:** 22021

**Date Published:** July 2022

**Geographic Area Covered:**

The Pennsylvania portion of the DVRPC planning area, which covers the counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania.

**Key Words:**

Air Quality, *Connections 2050* Long-Range Plan, Multijurisdictional Nonattainment Area, National Ambient Air Quality Standards, Nonattainment Area, Maintenance Area, $NO_x$, 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 Fiscal Year (FY) 2023 Pennsylvania Transportation Improvement Program (TIP). 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 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 TIP through May 2022.

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