

Transportation Conformity Reaffirmation

Connections 2045 Long-Range Plan,
FY 2018 New Jersey TIP,
and FY 2019 Pennsylvania TIP



January 2019



The Delaware Valley Regional Planning Commission is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.



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.

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Table of Contents

Introduction	1
Background	1
Emissions Analysis	5
Ground-Level Ozone	5
Ozone NAAQS and the DVRPC Region	5
Previous Analysis	5
Interagency Consultation and Public Outreach	7
Interagency Consultation	7
Public Participation	7
Conclusion	9

Figures

- **Figure 1:** Philadelphia–Wilmington–Atlantic City 2008 and 2015 Eight-Hour Ozone Nonattainment Areas 3

Tables

- **Table 1:** Mobile Source Analysis Years 6
- **Table 2:** VOCs Emissions Analysis Results (Tons/Day) 6
- **Table 3:** NO_x Emissions Analysis Results (Tons/Day) 6

Introduction

Background

On June 4, 2018, the U.S. Environmental Protection Agency (U.S. EPA) published a final rule that designated 51 areas across the country as nonattainment for the 2015 Ozone National Ambient Air Quality Standard (NAAQS) (83 FR 25776). These designations became effective 60 days after the *Federal Register* publication, on August 3, 2018. The Clean Air Act (CAA) section 176(c)(6) and the transportation conformity regulation, 40 CFR 93.102(d), provide a one-year grace period from the effective date of nonattainment area designations before transportation conformity applies to these areas. This means that conformity of long-range plans and transportation improvement programs (TIPs) for the 2015 Ozone NAAQS must be demonstrated in these nonattainment areas by the end of the grace period, which is August 3, 2019.

The Delaware Valley Regional Planning Commission (DVRPC) has previously demonstrated conformity for the ozone and fine particulate matter (PM_{2.5}) NAAQS for the *Connections 2045* Long-Range Plan (Plan), Fiscal Year (FY) 2017 Pennsylvania TIP, and FY 2018 New Jersey TIP in October 2017. DVRPC updated the conformity for the FY 2019 Pennsylvania TIP and transportation projects in the Pennsylvania portion of the Plan in June 2018.

The U.S. EPA guidance for determining transportation conformity (referred to as the *Final Rule*) allows Metropolitan Planning Organizations (MPOs), such as DVRPC, that have previously demonstrated conformity for their TIPs or Plans to reaffirm the previous conformity analysis (40 CFR93.122(g)) in lieu of performing a full conformity analysis as long as certain requirements are met. Those requirements are:

- Regionally significant projects in the transportation plan and TIPs must be consistent with those assumed in the previous regional emissions analysis, and the design concept and scope of each regionally significant project cannot be significantly different from that assumed in the previous regional emissions analysis.
- The 2015 ozone air quality standard attainment year must be included as an analysis year.
- The regional emissions analysis must demonstrate conformity to the most recent adequate or approved Ozone NAAQS budgets.

Through this reaffirmation process, DVRPC is confirming that:

- There have been no significant changes to the design or scope of regionally significant, nonexempt projects in the DVRPC Plan or relevant state TIPs since the most recent conformity finding for the TIPs in the DVRPC portions of New Jersey or Pennsylvania.
- The 2015 Ozone NAAQS attainment date of 2020 was included in the most recent relevant conformity analyses.
- The most recent DVRPC conformity demonstrations utilized the most recent ozone NAAQS budgets approved by the U.S. EPA to demonstrate conformity to the Ozone NAAQS.

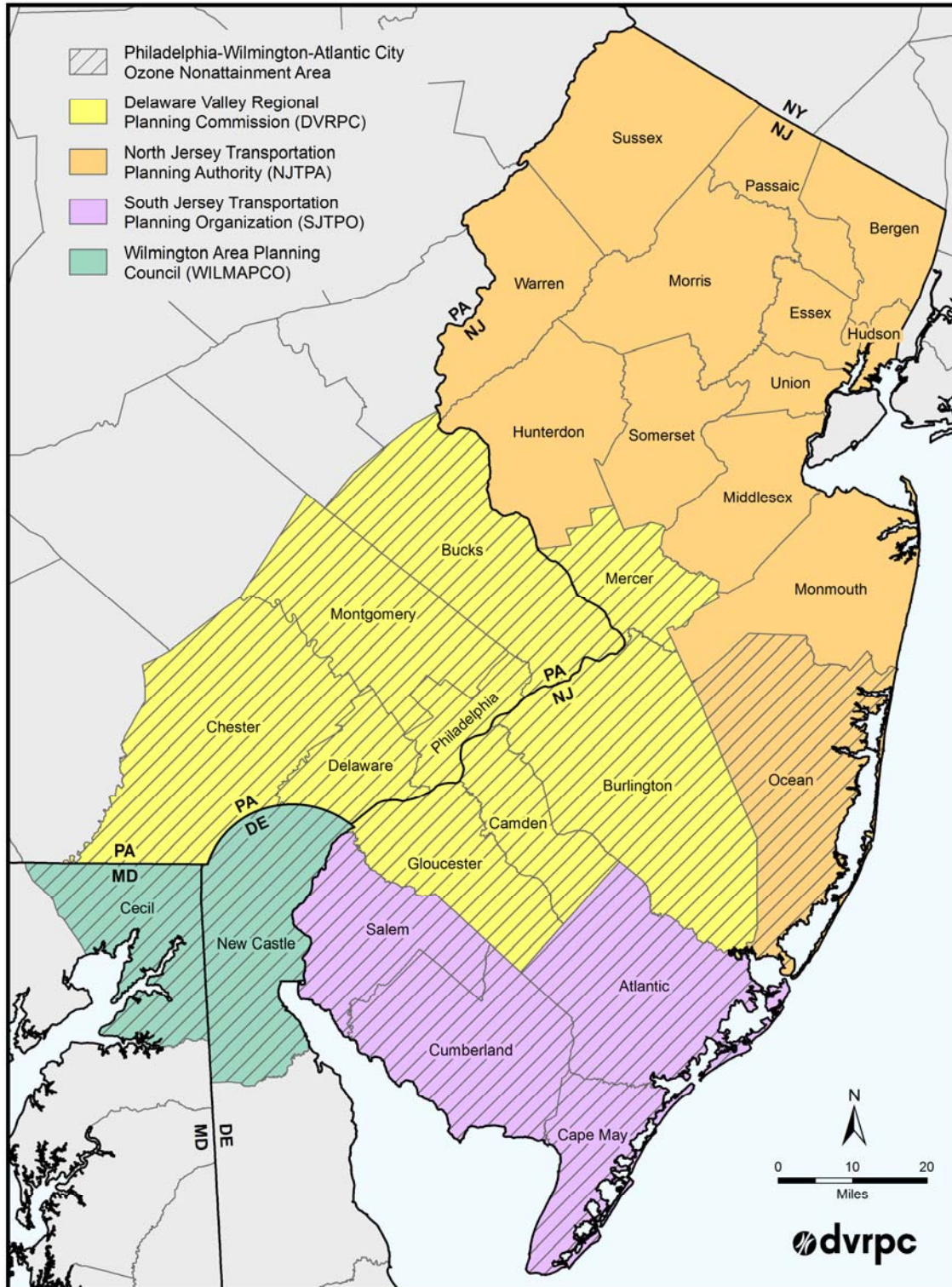
This reaffirmation process will serve to demonstrate transportation conformity to the 2015 Ozone NAAQS before the end of the one-year grace period as required by the CAA and Final Conformity Rule and confirms that the DVRPC region is demonstrating conformity for

- **Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_x) meeting the 2015 Eight-Hour Ozone NAAQS requirements in:**
 - the DVRPC portion of the Philadelphia–Wilmington–Atlantic City Ozone Nonattainment Area.

The DVRPC Plan and the TIPs have been found to be in conformity with the current New Jersey and Pennsylvania State Implementation Plans (SIPs) under the CAA. The forecasted emissions levels of VOCs, and NO_x do not exceed the respective budgets established by the state departments of environmental protection (state DEPs) in accordance with the *Final Rule* under the current NAAQS governing applicable pollutants.

Figure 1 demonstrates the boundaries of the Philadelphia-Wilmington-Atlantic City Ozone Nonattainment Areas for the 2008 and 2015 Ozone NAAQS. These boundaries are geographically identical.

Figure 1: Philadelphia–Wilmington–Atlantic City 2008 and 2015 Eight-Hour Ozone Nonattainment Areas



Source: DVRPC, 2018.

Emissions Analysis

Ground-Level Ozone

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 normal, healthy adults and children.

Ozone NAAQS and the DVRPC Region

In October 2015, the U.S. EPA strengthened the Eight-Hour Ozone Standard to 0.70 parts per million (ppm) from 75 ppm (80 FR 65292). The U.S. EPA finalized the nonattainment areas for this standard in June 2018. The entire nine-county DVRPC has been designated as a nonattainment area for the 2015 Ozone NAAQS.

The region had previously been designated as ozone nonattainment for the 1979, 1997, and 2008 Ozone NAAQS. As such, DVRPC has been required to demonstrate transportation conformity since the major amendments to the CAA established the conformity rule in 1993.

Pennsylvania and New Jersey have approved SIP Motor Vehicle Emissions Budgets (MVEBs) for the 1997 Eight-Hour Ozone Standard. Since ozone is not directly emitted, the projected VOC and NO_x emissions from the projects included in the Plan and TIPs must not exceed the established MVEBs in all analysis years in order to demonstrate conformity for ozone in the Philadelphia–Wilmington–Atlantic City Ozone Nonattainment Area. These budgets are the most current SIP MVEBs approved by the U.S. EPA to demonstrate conformity to the Ozone NAAQS in the DVRPC region. The *Final Rule* requires that regions with existing MVEBs for a standard of the same pollutant (i.e., 1997 Eight-Hour Ozone), must utilize the approved budget test to demonstrate conformity for the new standard.

Previous Analysis

At the state level, the SIP represents the state's roadmap to meet or "attain" air quality goals. Implemented SIPs contain MVEBs. Regional emissions estimates are compared against these budgets to determine progress toward meeting air quality goals. The *Final Rule* stipulates that each SIP is sovereign and that for a multistate MPO such as DVRPC, conformity applies separately to individual state portions of its planning area under respective SIPs.

DVRPC has most recently demonstrated transportation conformity to the 1997 and 2008 Ozone NAAQS in October 2017 for the New Jersey portion of the region and in June 2018 for the Pennsylvania portion of the region using the approved SIP MVEBs for the 1997 Ozone NAAQS. There have been no significant changes to regionally significant, nonexempt projects in the Plan or TIPs since those conformity demonstrations were approved by the U.S. Department of Transportation (DOT) in November 2017 and September 2018, respectively.

Tables 1, 2, and 3 demonstrate the analysis years and emissions analysis results from those determinations.

Table 1: Mobile Source Analysis Years

Year	Ozone	Note
2020	√	2012 PM _{2.5} Standard attainment date and near-term year used for Ozone analysis. This is also the attainment date for the 2015 Ozone Standard.
2025	√	PA and NJ PM _{2.5} SIP budget year and interim year used for Ozone analysis.
2035	√	Year within 10 years of previous analysis.
2045	√	DVRPC Plan Horizon year.

Source: DVRPC, 2018.

Table 2: VOCs Emissions Analysis Results (Tons/Day)

		PA SIP MVEB [†]	NJ SIP MVEB [†]	2020	2025	2035	2045
PA (June 2018)	Emissions from MOVES 2014A	61.09	–	30.92	22.48	12.37	9.53
NJ (October 2017)	Emissions from MOVES 2014A	–	25.98	11.12	7.66	4.97	4.52

Source: DVRPC, 2017 and 2018.

Note: MOVES = Motor Vehicle Emissions Simulator

[†] The most recent Eight-Hour Ozone SIP MVEBs (2008 in Pennsylvania or 2009 in New Jersey) will apply to all future analysis years. All emissions are rounded off to the nearest 100th of a ton per day.

Table 3: NO_x Emissions Analysis Results (Tons/Day)

		PA SIP MVEB [†]	NJ SIP MVEB [†]	2020	2025	2035	2040
PA (June 2018)	Emissions from MOVES 2014A	108.78	–	51.71	31.91	14.96	11.90
NJ (October 2017)	Emissions from MOVES 2014A	–	63.66	19.27	11.38	6.81	6.34

Source: DVRPC, 2017 and 2018.

Note: [†] The most recent Eight-Hour Ozone SIP MVEBs (2008 in Pennsylvania or 2009 in New Jersey) will apply to all future analysis years. All emissions are rounded off to the nearest 100th of a ton per day.

Tables 1–3 demonstrate that the DVRPC *Connections 2045* Long-Range Plan, FY 2018 TIP for New Jersey, and FY 2019 TIP for Pennsylvania meet the conformity requirements for the 1997, 2008, and 2015 Ozone NAAQS.

Interagency Consultation and Public Outreach

Interagency Consultation

The current conformity findings for the DVRPC Plan and each state's TIPs were conducted in accordance with all CAA and *Final Rule* regulations, including the applicable Interagency Consultation Group (ICG) consultation and public outreach requirements. For this reaffirmation, the process of conducting this action, public notification procedures, and the DVRPC Board adoption timeline were presented to both the Pennsylvania and New Jersey ICGs in October 2018 via email. ICG members include U.S. EPA Regions 2 and 3, Federal Transit Authority Regions 2 and 3, New Jersey and Pennsylvania Federal Highway Administration Offices, New Jersey DOT, New Jersey DEP, New Jersey Transit, Pennsylvania DOT, Pennsylvania DEP, the Delaware River Port Authority / Port Authority Transit Company, Southeastern Pennsylvania Transit Authority, and the City of Philadelphia.

The ICGs approved DVRPC's proposal to utilize the reaffirmation process to satisfy the one-year deadline to demonstrate transportation conformity for the 2015 Ozone NAAQS on November 1, 2018.

Public Participation

DVRPC opened a mandated 30-day public comment period on December 6, 2018, to receive comments on the draft conformity reaffirmation. The announcement for the public comment period for this action appeared in five major newspapers throughout the region during the week of December 3, 2018. Additionally, a media release was sent to local television, radio, and print media.

This draft conformity reaffirmation document was distributed to various libraries throughout the region and made available online at www.dvrpc.org/airquality/conformity. The ICG affirmed that a public meeting was not required for this action. The comment period closed on January 7, 2019, at 5:00 PM.

DVRPC accepted public comments on the Draft Conformity Reaffirmation document by email at airconformity@dvrpc.org; by fax at (215) 592-9125; by mail at the address at the end of this document, Attention: TIP/Plan/Conformity Comments.

There were no comments submitted during the comment period.

Conclusion

The DVRPC Plan and TIPs have been found by the U.S. DOT to be in conformity with the current New Jersey and Pennsylvania Ozone SIPs under the CAA. The forecasted emissions levels of VOCs and NO_x do not exceed the respective budgets established by the states in accordance with the *Final Rule* under the 1997, 2008, and 2015 Ozone NAAQS.

DVRPC confirms that:

- There have been no significant changes to the design or scope of regionally significant, non-exempt projects in the DVRPC Plan or relevant state TIPs since the most recent conformity finding for the Plan or TIPs in the DVRPC portions of New Jersey or Pennsylvania.
- The 2015 Ozone NAAQS attainment date of 2020 was included in the most recent relevant conformity analyses.
- The most recent DVRPC conformity demonstrations utilized the most recent ozone NAAQS budgets approved by the U.S. EPA to demonstrate conformity to the Ozone NAAQS.

With this action, DVRPC is reaffirming its previous conformity analysis of the *Connections 2045* Long-Range Plan, FY 2018 TIP for New Jersey, and FY 2019 TIP for Pennsylvania as permitted by regulation 40 CFR 93.122(g), in order to demonstrate conformity to the 2015 Ozone NAAQS in the Philadelphia-Wilmington-Atlantic City Ozone Nonattainment Area by the proscribed deadline of August 3, 2019.

Transportation Conformity Reaffirmation

Connections 2045 Long-Range Plan, FY 2018 New Jersey TIP, and FY 2019 Pennsylvania TIP

Publication Number: 19005

Date Published: January 2019

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:

Transportation Conformity, Air Quality, National Ambient Air Quality Standards, Ozone, Volatile Organic Compounds (VOCs), Nitrogen Oxides, Nonattainment Area, Multijurisdictional Nonattainment Area, *Connections 2045* Long-Range Plan, Transportation Improvement Program (TIP), State Implementation Plan (SIP).

Abstract:

DVRPC is reaffirming its demonstration of transportation conformity of the *Connections 2045* Long-Range Plan, the FY 2018 TIP for New Jersey, and FY 2019 TIP for Pennsylvania. This reaffirmation confirms that the DVRPC Plan and relevant TIPs meet the National Ambient Air Quality Standards requirements governing the 2015 ozone standard in the Philadelphia–Wilmington–Atlantic City, PA-NJ-DE Ozone Nonattainment Area. This conformity finding reflects all amendments to the TIPs and the Long-Range Plan adopted through November 2018.

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