

Congestion Mitigation and Air Quality Program

Interim Performance Plan (2022–2023)



SEPTEMBER 2024





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CHAPTER 1:

Introduction

Purpose

The Infrastructure Investment and Jobs Act (IIJA), as well as the preceding *Moving Ahead for Progress in the 21st Century Act (MAP-21)* and the *Fixing America's Surface Transportation Act (FAST Act)*, have integrated performance measures into many federal surface transportation programs and required the United States Department of Transportation (USDOT) to establish a set of national measures on which state departments of transportation (DOTs) must submit targets and report performance or condition. The Federal Highway Administration (FHWA) finalized three performance measures for the purpose of carrying out the Congestion Mitigation and Air Quality (CMAQ) Program. There are two CMAQ congestion measures and one CMAQ emissions measure. The CMAQ rule is part of the System Performance measures and is known as Performance Measure 3 (PM3). The first two are safety (PM1) and infrastructure condition (PM2).

The CMAQ congestion measures are peak-hour excessive delay (PHED) and percent of non-single occupant vehicle (SOV) travel. The PHED measure is the annual hours of peak-hour excessive delay per capita that occurs within the applicable urbanized areas (UZA). The percent of non-SOV travel measure is the percentage of travel, in the UZA by means other than SOV. These measures only apply to the National Highway System (NHS) mileage in urban areas with a population of at least 200,000 people. The CMAQ emissions measure is the cumulative estimated emissions reductions for all CMAQ-funded projects obligated during the performance period for each applicable criteria pollutant.

State DOTs, in coordination with Metropolitan Planning Organizations (MPOs), are required to provide FHWA with biennial progress reports for the three CMAQ performance measures. This report will serve as the interim progress report for the 2022–2025 CMAQ performance period for the Delaware Valley Regional Planning Commission (DVRPC) area which encompasses all or parts of Philadelphia, PA–NJ–DE–MD Urbanized Area (Philadelphia UZA); Allentown–Bethlehem–Easton, PA–NJ Urbanized Area (Allentown UZA); the New York–Newark, NY–NJ–CT Urbanized Area (New York UZA); and the Trenton–Princeton, NJ Urbanized Area (Trenton UZA). This report demonstrates DVRPC's progress toward the four-year CMAQ performance targets that were established in DVRPC's "Congestion Mitigation and Air Quality Final Performance Plan (2018–2021) and Baseline Report (2022–2025)."¹

The PM3 congestion measures are based on the 2010 Urbanized Area (UZA) boundaries. The UZA coordination and target setting was based on these boundaries and reflects the PM3 applicability as identified in FHWA's "Applicability Determination: CMAQ Traffic Congestion and CMAQ On-Road Mobile Source Emissions Measures."² Urban area boundaries have changed with the 2020 Census, but for the purpose of this report the urbanized areas will be referred to as the UZAs. The source for the data used to determine each measure for each UZA is noted for each congestion measure performance table.

¹ Delaware Valley Regional Planning Commission (DVRPC), "Congestion Mitigation and Air Quality Final Performance Plan (2018–2021) and Baseline Report (2022–2025)" (DVRPC Publication # TR23003, Philadelphia, PA, 2022), <https://www.dvrpc.org/reports/tr23003.pdf> (accessed September 1, 2024).

² USDOT Federal Highway Administration, "Applicability Determination: CMAQ Traffic Congestion and CMAQ On-Road Mobile Source Emissions Measures" (23 CFR 490.707 and 490.807, Washington, D.C., 2021), <https://rosap.ntl.bts.gov/view/dot/72434> (accessed September 1, 2024).

Applicability

The DVRPC region is part of the Philadelphia UZA, which has a population of 5,695,000 (based on 2022 U.S. Census American Community Survey (ACS) five-year estimates) and includes the Trenton UZA, as well as small portions of the Allentown and New York UZAs. The Trenton UZA has a population of 367,546, the Allentown UZA has a population of 622,018, and the New York UZA has a population of 19,198,299 (all based on 2022 ACS five-year estimates). The DVRPC region includes a complex combination of nonattainment and maintenance areas for two of the National Ambient Air Quality Standards (NAAQS) — ozone and fine particulate matter (PM_{2.5}). This data reflects information from the 2020 Decennial Census.³ 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.

Interim Performance Report Requirements

Federal performance measure regulations (23 CFR 490) require that MPOs serving over 200,000 people and representing ozone, PM_{2.5}, or CO nonattainment or maintenance areas must report progress on attaining the two-year targets for congestion and emissions reductions set out in the MPO's baseline *CMAQ Performance Plan*.

An MPO interim performance plan must include the PHED and percent non-SOV values for each UZA in the MPO planning area for calendar years 2022 and 2023. All of the MPOs and states serving a common UZA must adopt common congestion targets and report a unified performance value for the UZA. The DVRPC planning area includes two UZAs with over one million people—the Philadelphia and New York UZAs—and two UZAs with over 200,000 people—the Trenton and Allentown UZAs. DVRPC has coordinated with each MPO and state DOT that serve portions of these UZAs to adopt common performance measures and targets.

The interim performance report must also include the cumulative emissions reductions for CMAQ-funded projects in the MPO's service area for federal fiscal years 2022 and 2023 as they are reported in the FHWA CMAQ Public Access System (PAS). Targets and performance are reported for CMAQ-funded projects separately for each state served by the MPO. DVRPC coordinated with Pennsylvania DOT (PennDOT) and New Jersey DOT (NJDOT) to develop the emissions reduction targets. Emissions reductions from CMAQ projects in the DVRPC region are included in each relevant state's performance plan and targets.

The interim performance plan must include a list of the MPO's CMAQ-funded projects and an updated description of how the projects will assist the MPO meet the established four-year targets for each performance measure. The report should also include updates to the project lists from the baseline report that identifies CMAQ-funded projects that were expected to contribute to the two-year targets, including additions, deletions, changes in scope, and emissions reductions estimates in kilograms/day (kg/d) for each applicable pollutant.

This performance report covers the following nonattainment and maintenance areas within the DVRPC planning area:

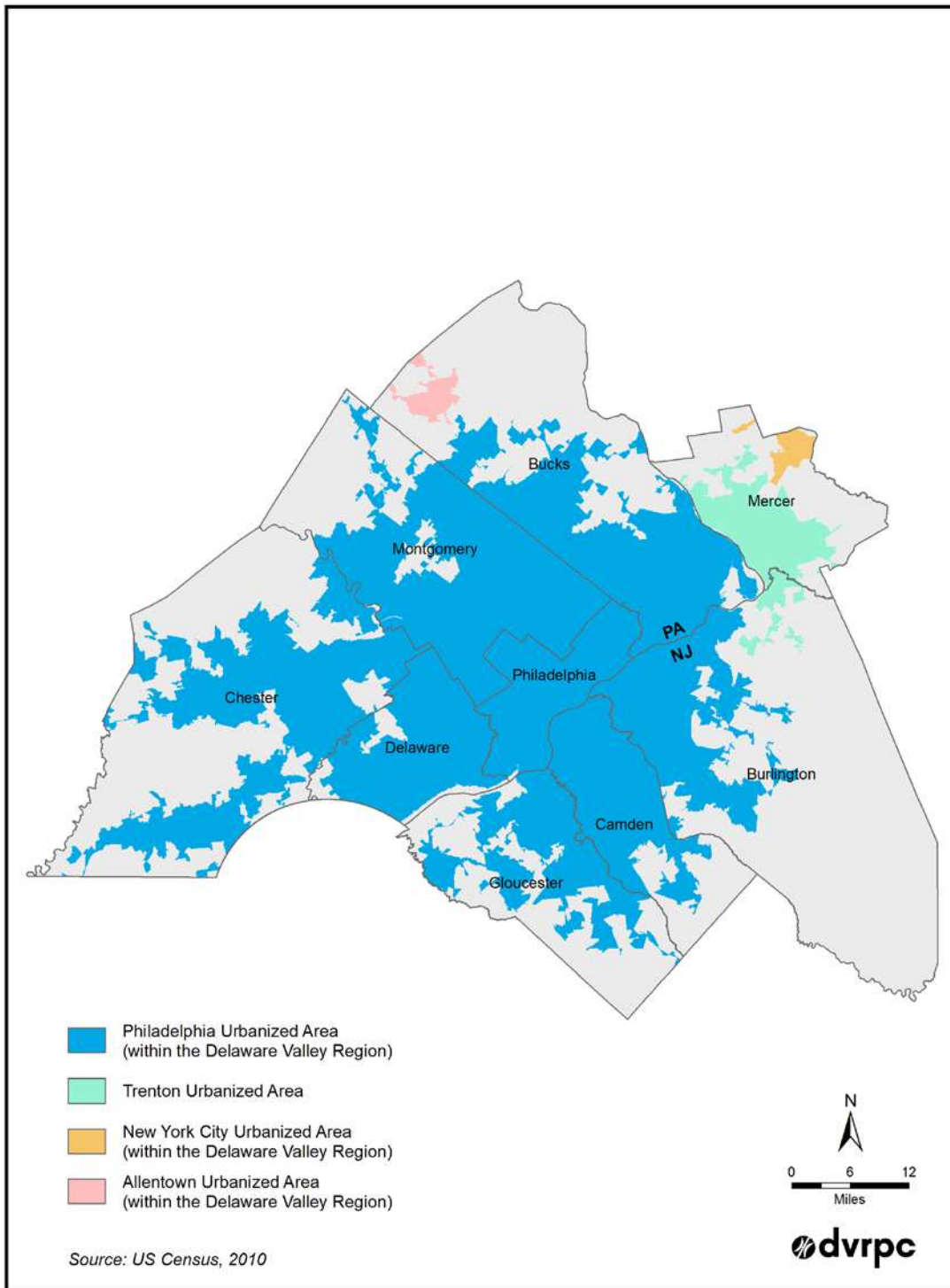
- the DVRPC portion of the Philadelphia–Wilmington–Atlantic City PA–NJ–MD–DE Ozone Nonattainment Area;

³ U.S. Census Bureau, "2020 U.S. Census Data," <https://www2.census.gov/programs-surveys/decennial/2020/data/> (accessed September 1, 2024).

- the DVRPC portion of the Philadelphia–Wilmington, PA–NJ–DE 24-Hour PM_{2.5} Maintenance Area;
- the DVRPC portion of the New York–Northern New Jersey–Long Island, NY–NJ–CT PM_{2.5} Maintenance Area; and
- the Delaware County, PA Annual PM_{2.5} Maintenance Area.

Figure 1 demonstrates the Philadelphia, Trenton, New York, and Allentown UZA boundaries within the DVRPC planning area. Figures 2 and 3 show the relevant nonattainment and maintenance areas in the region. It is important to note that the 2010 UZA boundaries were used to analyze the CMAQ congestion measures while updated population data references the 2020 U.S. Census.

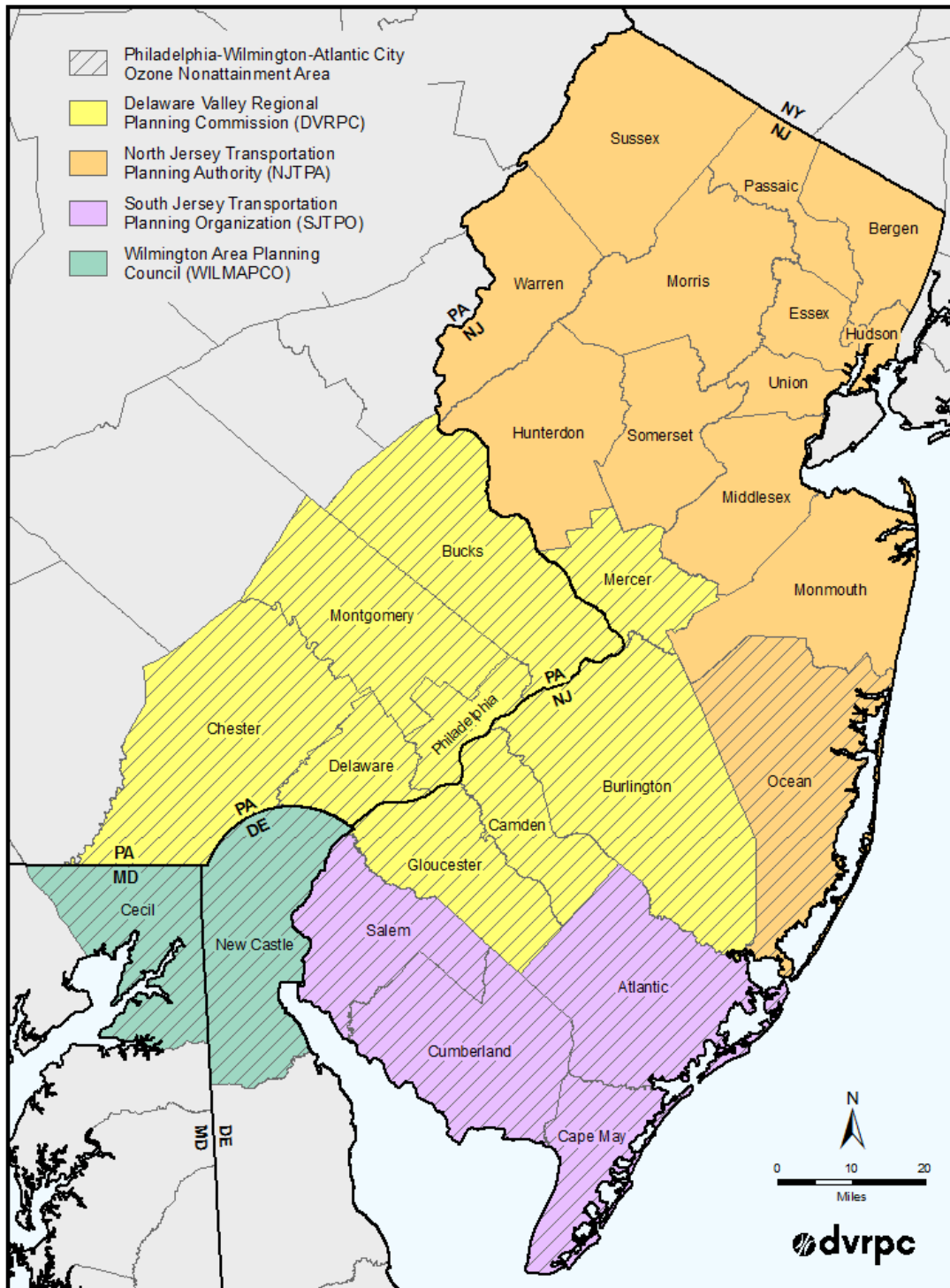
Figure 1: Urbanized Areas Boundaries Within the DVRPC Planning Area*



Source: DVRPC 2024

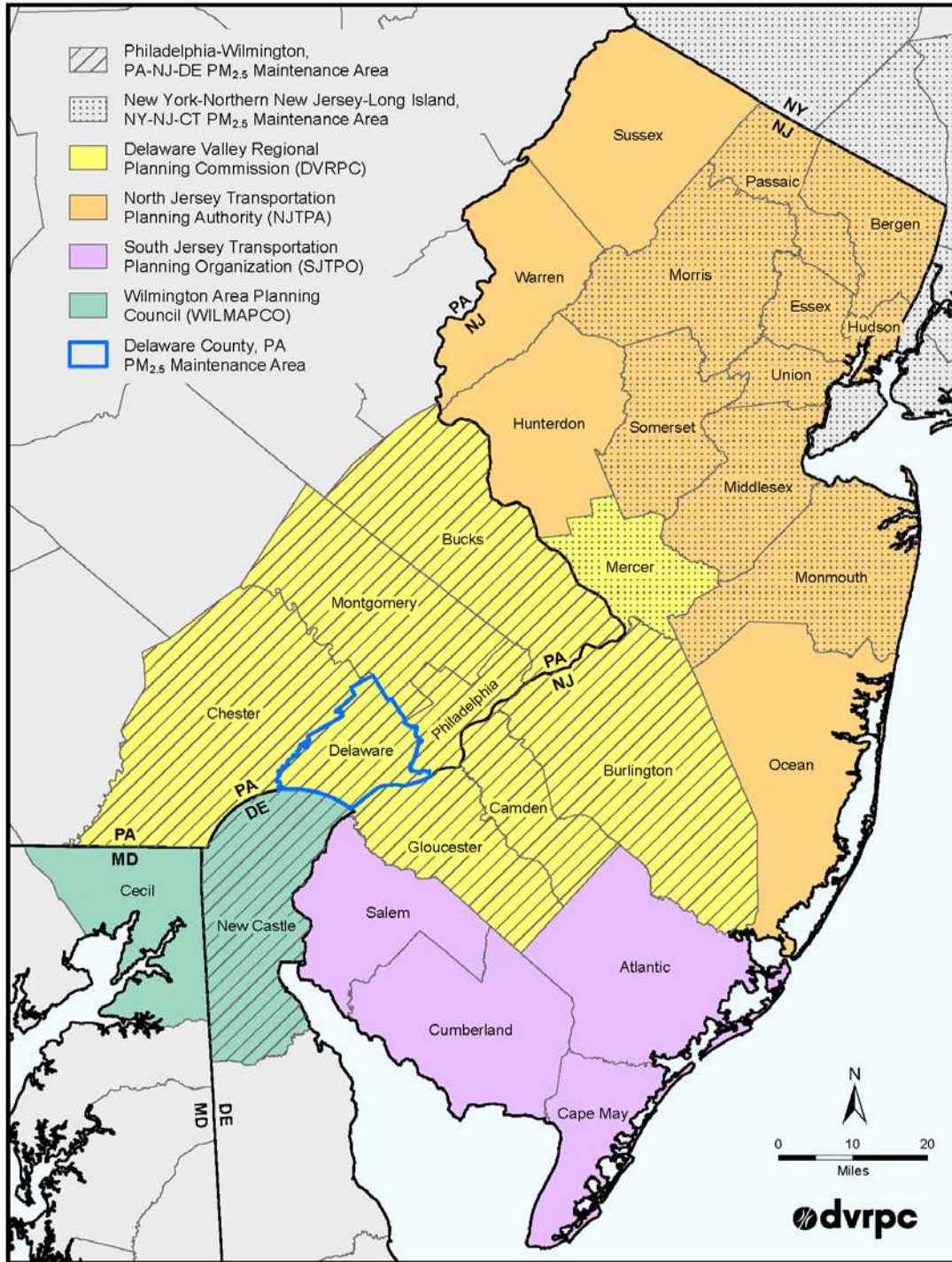
*Note the CMAQ Congestion Measures used the 2010 Urbanized Area boundaries for analysis

Figure 2: Philadelphia-Wilmington-Atlantic City 8-Hour Ozone Nonattainment Area



Source: DVRPC 2024

Figure 3: PM_{2.5} Maintenance Areas in the DVRPC Region



Source: DVRPC 2024

CHAPTER 2:

Two-Year Performance and Targets

Congestion Measures – Philadelphia and Trenton UZAs

PM3 rules require that all of the MPOs and states serving a common UZA must adopt common congestion targets and report a unified performance value for the UZA. In the Philadelphia UZA, DVRPC coordinated the discussion on the interim period performance and targets between four state DOTs and six MPOs. The state DOTs are PennDOT, NJDOT, Delaware DOT, and Maryland DOT. The MPOs are DVRPC, North Jersey Transportation Planning Authority (NJTPA), South Jersey Transportation Planning Organization (SJTPO), Lancaster Area Transportation Study, and the Wilmington Area Planning Council (WILMAPCO). The planning partners in the Trenton UZA include NJDOT and DVRPC.

A unified PM3 traffic congestion measure four-year target adjustment in the mid-period of the second performance period (2022–2025) for the Philadelphia and Trenton UZAs, was accomplished through one virtual coordination meeting held on April 25, 2024. An agenda was sent out via email before the coordination meeting, so that partnering agencies could prepare for the topics discussed. Partner agencies were given the opportunity to recommend changes or additions to the agenda as appropriate.

The coordination meeting started with a review of target-setting procedures, methodologies, data sources, and trends. The mid-period performance progress was presented along with potential adjustments for the annual hours of PHED per capita and percent non-SOV travel measures four-year targets. Overall policy goals and objectives, regulations, required data and metrics, UZA geography, and data trends were also discussed. Data-driven considerations included reviewing existing trends, including UZA population, vehicles miles traveled (VMT), transit ridership, percent non-SOV travel, and annual hours of PHED per capita. April 25 was established as the “pencils down” date to decide on adjusting the four-year targets for the two measures.

In the Philadelphia UZA, ACS five-year population estimates increased on average 0.6 percent per year from 2018 to 2022. According to FHWA, VMT on the NHS decreased in the UZA by 2.5 percent from 2021 to 2022, but 2022 VMT is still below 2019 levels. Prior to the pandemic VMT increased on average 0.9 percent per year from 2015 to 2019. The National Transit Database (NTD) indicates that transit passenger miles increased by 52.1 percent in the UZA from 2021 to 2022, but passenger miles are still significantly down compared to pre-COVID levels. According to the five-year ACS, work from home increased in the UZA from 11.7 percent (2017–21) to 14.4 percent (2018–22). The DVRPC regional travel demand model indicates increased population, employment, and VMT during the performance period. Other considerations, such as alternative scenarios of workers working from home, taking transit, and driving alone were reviewed. Projects that could help “move the needle” on the measures were also considered.

In the Trenton UZA, ACS five-year population estimates increased on average 4.9 percent per year from 2018 to 2022. The large increase is partially due to the new expanded 2020 Trenton Urban Area (UA) that includes more population than the prior UZA. According to FHWA, VMT on the NHS increased 2.1 percent from 2021 to 2022, but 2022 VMT is still below pre-COVID 2019 levels. The NTD indicates that transit passenger miles increased in the UZA by 108 percent from 2021 to 2022, but passenger miles are still significantly below pre-COVID 2019 levels. According to the five-year ACS, work from home increased in the UZA from 9.8 percent (2017–2021) to 14.4 percent (2018–2022).

The working group considered how alternative scenarios of workers working from home, taking transit, and driving alone could impact future congestion levels and commute modeshare preferences. There were various uncertainties noted that might affect driver behavior and achieving the targets, such as inflation and associated energy and supply chain disruptions, and work from home policies. Also, the Philadelphia and Trenton 2010 UZAs were updated to new UAs in 2020 as a result of the Decennial Census, which went into effect in 2022 and impacted how population and percent non-SOV travel estimates were tabulated in the new geographies. Trending 2020 ACS five-year estimates to prior years should be used with caution when assessing changes and setting targets.

Finally, as part of the coordination group meeting, each agency in attendance was asked to affirm their support for the proposed targets. After the meeting, a summary was prepared and sent to the partnering agencies serving as a record of the meeting and as a reference should questions or clarifications arise. Any agency that was not in attendance was contacted and given the opportunity to support the target. All agencies affirmed agreement. The consensus of a four-year target adjustment for the Philadelphia and Trenton UZAs was agreed upon by all partnering agencies and will be submitted to FHWA by the respective state DOTs by October 1st 2024. Meeting agendas, summary documents, and any other associated correspondence with the partnering agencies is available upon request.

Based on consensus at the April 25, 2024 meeting, the partnering agencies agreed to adjust the four-year target for the percent non-SOV travel measure for each UZA and to not adjust the annual hours of PHED per capita target. The measures are presented in Tables 1 and 2 along with the existing baseline, two- and four-year targets, and two-year performance for the Philadelphia UZA and Tables 3 and 4 for the Trenton UZA. The following sections discuss the four-year targets, and the changes made.

Philadelphia UZA Annual Hours of PHED per Capita

The annual hours of PHED per capita measure two-year performance for the interim performance period was calculated for the UZA using the Regional Integrated Transportation Information System (RITIS) Probe Data Analytics (PDA) Suite on April 19, 2024. The two-year target established in 2022 baseline performance plan was 15.2. The target is met if the PHED performance is lower than the target. The two-year performance was 13.9, therefore the target was achieved. The coordination group agreed to not adjust the four-year target for PHED (see Table 1).

The four-year target was not adjusted due to annual hours of PHED per capita increasing from 12.5 (2022) to 13.9 in (2023) and approaching the four-year target, despite CMAQ programs and projects programmed to reduce excessive delay. The four-year target is one-tenth of an hour per capita less than the two-year target in anticipation of future projects contributing to some overall reductions in excessive delay. However, some increases in excessive delay are expected due to economic growth and increases in the number of people traveling, and the movement of freight on the NHS. This would only be partially offset by population growth reflected in the “per capita” portion of the measure. Also, consideration was given to the IIJA and “state-of-good-repair” projects that will slow down traffic during construction, as well as continued growth in e-commerce that may contribute to delays. Various projects in the Pennsylvania Transportation Improvement Program (TIP) (FY2025–2028) and New Jersey TIP (FY2024–2027) were identified that could help reduce excessive delay.

Table 1 presents the performance measure baseline, two-year performance, and target values for the annual hours of PHED per capita measure for the Philadelphia UZA.

Table 1: Baseline, Two- and Four-Year Targets, Two-Year Performance, and Four-Year Target Adjustments for Annual Hours of PHED per Capita Measure for the Philadelphia, PA-NJ-DE-MD Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|---------|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| PHED | 13.1 | 13.9 | 15.2 | 15.1 | None |

Source: DVRPC 2024

Notes:

- This measure utilized the 2010 UZA boundaries. The UZA 2010 boundary and associated five-year ACS estimated population were obtained from the U.S. Census.
- The annual hours of PHED is divided by the population to derive the per Capita measure.
- Reporting segments and travel times (in 15-minute intervals) were derived from the National Performance Management Research Data Set.
- Hourly traffic volumes by annual vehicle classification for buses, trucks, and cars were derived from annual average daily traffic reported in the Highway Performance Monitoring System and from FHWA volume profiles.
- Annual vehicle occupancy for cars, buses, and trucks was provided by FHWA.

Philadelphia UZA Percent Non-SOV Travel

The percent non-SOV travel measure for the interim performance period was derived from the U.S. Census ACS five-year estimates for the UZA. The two-year target set in the baseline performance report in 2022 was 30.0 percent. The percent Non-SOV target is met if the performance is greater than the target. The two-year performance was 32.8 percent therefore the target was achieved. The coordination group agreed to adjust the four-year target, raising it from 30.0 percent to 33.0 percent (see Table 2).

The four-year target was adjusted based on various considerations, including high two-year performance, programs and projects on the Pennsylvania TIP (FY2025–2028) and New Jersey TIP (FY2024–2027) to increase percent non-SOV travel, and the continuance of work from home policies. The five-year ACS percent non-SOV travel measure shows a substantial increase due to the effects of COVID-19 and workers shifting to working from home, from 32.8 percent (2017–2021) to 34.6 percent (2018–2022).

Table 2 presents the performance measure baseline, two-year performance, and target values for the annual hours of non-SOV travel measure for the Philadelphia UZA.

Table 2: Baseline, Two- and Four-Year Targets, Two-Year Performance, and Four-Year Target Adjustments for the Percent Non-SOV Travel Measure for the Philadelphia, PA-NJ-DE-MD Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|--|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| Percent Non-Single Occupant Vehicle Travel | 30.6% | 32.8% | 30.0% | 30.0% | 33.0% |

Source: DVRPC 2024

Notes:

- Baseline, performance, and target values are based on one year prior to the years listed in the table due to the lag in availability of U.S. Census five-year ACS data. For example, the baseline value refers to ACS (2016–2020).
- Two-year performance and subsequent performance are based on 2020 Urban Areas.

Trenton UZA - Annual Hours of PHED per Capita

The annual hours of PHED per capita measure two-year performance for the interim performance period was calculated for the UZA using the RITIS PDA Suite on April 19, 2024. The two-year target established in the 2022 baseline performance plan was 5.7. The target is met if the PHED performance is lower than the target. The two-year performance was 4.4, therefore, the target was achieved. The coordination group agreed to not adjust the four-year target for PHED (see Table 3).

The four-year target was not adjusted due to annual hours of PHED per capita increasing from 4.1 (2022) to 4.4 (2023) and approaching the four-year target, despite CMAQ programs and projects programmed to reduce excessive delay. Some increases in excessive delay are expected due to economic growth and increases in the number of people traveling, and the movement of freight on the NHS. This would only be partially offset by population growth reflected in the “per capita” portion of the measure. Also, consideration was given to IJJA and “state of good repair” projects that will slow down traffic during construction, and continued growth in e-commerce may contribute to delays. Various projects in the New Jersey TIP (FY2024–2027) were identified that could help reduce excessive delay.

Table 3 presents the performance measure baseline, two-year performance, and target values for the annual hours of PHED per capita measure for the Trenton UZA.

Table 3: Baseline, Two- and Four-Year Targets, Two-Year Performance, and Four-Year Target Adjustment for Annual Hours of PHED per Capita Measure for the Trenton, NJ Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|---------|------------------|---------------------------------|----------------------------|-----------------------------|----------------------------------|
| PHED | 3.4 | 4.4 | 5.7 | 5.7 | None |

Source: DVRPC 2024

Notes:

- This measure utilized the 2010 UZA boundaries. The UZA 2010 boundary and associated five-year ACS estimated population were obtained from the U.S. Census.
- The annual hours of PHED is divided by the population to derive the per capita measure.
- Reporting segments and travel times (in 15-minute intervals) were derived from the National Performance Management Research Data Set.
- Hourly traffic volumes by annual vehicle classification for buses, trucks, and cars were derived from annual average daily traffic reported in the Highway Performance Monitoring System and from FHWA volume profiles.
- Annual vehicle occupancy for cars, buses, and trucks was provided by FHWA.

Trenton UZA Percent Non-SOV Travel

The percent non-SOV travel measure for the interim performance period was derived from the U.S. Census ACS five-year estimates for the UZA. The two-year target set in the baseline performance report in 2022 was 26.5 percent. The percent non-SOV target is met if the performance is greater than the target. The two-year performance was 30.0 percent therefore the target was achieved. However, the coordination group agreed to adjust the four-year target, raising it from 26.8 percent to 30.0 percent (see Table 4).

The four-year target was adjusted based on various considerations, including high two-year performance, programs and projects on the New Jersey TIP (FY 2024-2027) to increase percent non-SOV travel, and the continuance of remote work. The percent non-SOV travel measure five-year estimates shows a substantial increase due to the effects of COVID-19 and workers shifting to working from home, from 30.0 percent (2017–2021) to 33.9 percent (2018–2022).

Table 4 presents the performance measure baseline, two-year performance, and target values for the annual hours of non-SOV travel measure for the Trenton UZA.

Table 4: Baseline, Two- and Four- Year Targets, Two-Year Performance, and Four-Year Target Adjustment for the Percent Non-SOV Travel Measure for the Trenton, NJ Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|---|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| Percent Non-Single Occupant Vehicle Travel | 26.4% | 30.0% | 26.5% | 26.8% | 30.0% |

Source: DVRPC 2024

Notes:

- Baseline, performance, and target values are based on one year prior to the years listed in the Table due to the lag in availability of U.S. Census five-year ACS data. For example, the baseline value refers to ACS (2016–2020).
- Two-year performance and subsequent performance are based on 2020 Urban Areas.

Congestion Measures – New York UZA

Since a portion of the New York UZA is in the DVRPC MPO in Mercer County, New Jersey, DVRPC coordinated with the NJTPA, the New York Metropolitan Transportation Council (NYMTC), NJDOT, the New York State DOT, and others to reach consensus on establishing a unified PM3 traffic congestion measure four-year target adjustment in the mid-period of the second performance period and reviewing interim period performance. NJTPA and NYMTC led efforts in discussions on adjusting four-year targets and reviewing interim period progress.

DVRPC participated in coordination meetings to establish consensus on not adjusting the four-year targets during the mid-period of the second performance period (2022–2025) for the New York UZA and agreed to adopt those targets in July 2024. The annual hours of PHED per capita and percent non-SOV travel two- and four- year targets, two-year performance, and four-year targets for the New York UZA are presented in Tables 5 and 6.

Annual Hours of PHED per Capita

The annual hours of PHED per capita measure two-year performance for the interim performance period was reported by the New-York UZA coordination group. The two-year target set two years ago in the first year of the performance period was 22.0. The two-year performance was 19.8; therefore, the target was achieved. The coordination group decided not to adjust the four-year target. (see Table 5).

Table 5: Baseline, Two- and Four-Year Targets, Two-Year Performance, and Four-Year Target Adjustment for Annual Hours of PHED per Capita Measure for the New York–Newark, NY–NJ–CT Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|---------|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| PHED | 20.9 | 19.8 | 22.0 | 21.0 | None |

Source: NJDOT 2024

Notes

- This measure utilized the 2010 UZA boundaries. The UZA 2010 boundary and associated five-year ACS estimated population were obtained from the U.S. Census.
- Reporting segments and travel times (in 15-minute intervals) were derived from the National Performance Management Research Data Set.
- Hourly traffic volumes and annual vehicle classification for buses, trucks, and cars were derived from annual average daily traffic reported in the Highway Performance Monitoring System and from FHWA volume profiles.
- Annual vehicle occupancy for cars, buses, and trucks was provided by FHWA.

Percent Non-SOV Travel

The percent non-SOV travel measure two-year performance for the interim performance period was derived from the U.S. Census ACS five-year estimates for the UZA. The two-year target set in the baseline performance report in 2022 was 52.4 percent. The percent non-SOV target is met if the performance is greater than the target. The two-year performance was 53.4 percent; therefore, the target was achieved. The coordination group agreed to not adjust the four-year target for percent non-SOV travel. (see Table 6).

Table 6: Baseline, Two- and Four- Year Targets, Two-Year Performance, and Four-Year Target Adjustment for the Percent Non-SOV Travel Measure for the New York–Newark, NY–NJ–CT Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|--|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| Percent Non-Single Occupant Vehicle Travel | 52.4% | 53.4% | 52.4% | 52.5% | None |

Source: NJDOT 2024

Notes:

- Baseline, performance, and target values are based on one-year prior to the years listed in the Table due to the lag in availability of U.S. Census five-year ACS data. For example, the baseline value refers to ACS (2016–2020).
- Two-year performance and subsequent performance are based on 2020 Urban Areas.

Congestion Measures — Allentown UZA

Since a portion of the Allentown–Bethlehem–Easton, PA–NJ UZA is in the DVRPC MPO in Bucks County, Pennsylvania, DVRPC has coordinated with the Lehigh Valley Planning Commission (LVPC), NJTPA, PennDOT, and NJDOT to reach consensus on establishing a unified PM3 traffic congestion measure four-year target adjustment in the mid-period of the second performance period and reviewing mid-period performance. LVPC led efforts in discussions on adjusting four-year targets and reviewing interim period performance.

DVRPC participated in coordination meetings to establish consensus on four-year target adjustments for the interim period of the second performance period (2022–2025) for the Allentown UZA and agreed to adopt those targets in July 2024. The annual hours of PHED per capita and percent non-SOV travel two- and four-year targets, and four-year target adjustments for the Allentown UZA are presented in Tables 7 and 8.

Annual Hours of PHED per Capita

The annual hours of PHED per capita measure two-year performance for the interim performance period was reported by the Allentown UZA coordination group.

The two-year target set two years ago in the first year of the performance period was 8.4. The two-year performance was 6.9; therefore, the target was achieved. The coordination group agreed to not adjust the four-year target (see Table 7).

Table 7: Baseline, Two- and Four-Year Targets, Two-Year Performance, and Four-Year Target Adjustment for Annual Hours of PHED Per Capita Measure for the Allentown–Bethlehem–Easton, PA–NJ Urbanized Area

| Measure | 2022 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|---------|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| PHED | 7.1 | 6.9 | 8.4 | 8.4 | None |

Source: PennDOT, PennDOT 2024

Notes

- This measure utilized the 2010 UZA boundaries. The UZA 2010 boundary and associated five-year ACS estimated population were obtained from the U.S. Census.
- Reporting segments and travel times (in 15-minute intervals) were derived from the National Performance Management Research Data Set.
- Hourly traffic volumes and annual vehicle classification for buses, trucks, and cars were derived from annual average daily traffic reported to the Highway Performance Monitoring System and from FHWA volume profiles.
- Annual vehicle occupancy for cars, buses, and trucks was provided by FHWA.

Percent Non-SOV Travel

The percent non-SOV travel measure two-year performance for the interim performance period was derived from the U.S. Census ACS five-year estimates for the UZA. The two-year target set in the baseline performance report in 2022 was 18.6 percent. The percent non-SOV target is met if the

performance is greater than the target. The two-year performance was 22.3 percent; therefore, the target was achieved. The coordination group agreed to not adjust the four-year target for percent non-SOV travel (see Table 8).

Table 8: Baseline, Two- and Four- Year Targets, Two-Year Performance, and Four-Year Target Adjustment for the Percent Non-SOV Travel Measure for the Allentown–Bethlehem–Easton, PA–NJ Urbanized Area

| Measure | 2021 Baseline | 2023 Two-Year Performance | 2023 Two-Year Target | 2025 Four-Year Target | 2025 Four-Year Target Adj. |
|--|---------------|---------------------------|----------------------|-----------------------|----------------------------|
| Percent Non-Single Occupant Vehicle Travel | 20.4% | 22.3% | 18.6% | 18.6% | None |

Source: PennDOT, NJDOT 2024

Notes:

- Baseline, performance, and target values are based on one year prior to the years listed in the Table due to the lag in availability of U.S. Census five-year ACS data. For example, the baseline value refers to ACS (2016–2020).
- Two-year performance and subsequent performance are based on 2020 Urban Areas.

On-Road Mobile Emissions Measures

DVRPC is a bi-state MPO with a population greater than one million that receives CMAQ funding in Pennsylvania and New Jersey. As such, DVRPC develops performance plans for the on-road mobile source emission performance measures for the DVRPC planning area in each state. DVRPC is required to develop a performance plan for the ozone precursors of volatile organic compounds (VOCs), and nitrogen oxides (NO_x), and PM_{2.5}.

Baseline

For the second performance period, 23 CFR 490 requires that DVRPC provide a baseline of the emissions benefits from CMAQ-funded projects for the performance period 2022–2025. The baseline emissions are extracted from the FHWA CMAQ PAS database. The baseline emissions value for the second performance period reflects the cumulative four-year emissions of the first performance period 2018–2021 as presented in DVRPC’s baseline *CMAQ Performance Plan*.

In each state, the baseline values reported in this section were extracted from the PAS database in July 2022. The baseline values were considered in the development of the targets for the second performance period.

Pennsylvania

Table 9 identifies the emissions reductions from CMAQ-funded projects (2018-2021) in the Pennsylvania portion of the DVRPC region.

Table 9: Baseline Emissions Reductions Values from CMAQ-Funded Projects in the Pennsylvania Portion of the DVRPC Region (2018–2021)

| Pollutant | Emissions Reduction (kg/day) |
|-----------------------------|---------------------------------------|
| | As Reported in FHWA CMAQ PAS Database |
| VOC Emissions | 217.099 |
| NO _x Emissions | 928.699 |
| PM _{2.5} Emissions | 33.019 |

Source: PennDOT 2022

New Jersey

Table 10 identifies the emissions reductions from CMAQ-funded projects (2018-2021) in the New Jersey portion of the DVRPC region.

Table 10: Baseline Emissions Reductions Values from CMAQ-Funded Projects in the New Jersey Portion of the DVRPC Region (2018–2021)

| Pollutant | Emissions Reduction (kg/day) As Reported in FHWA CMAQ PAS Database |
|-----------------------------------|---|
| VOC Emissions | 73.692 |
| NOx Emissions | 683.827 |
| PM_{2.5} Emissions | 111.813 |

Source: NJDOT 2022

Targets and Performance

DVRPC has coordinated emissions reduction target setting with both PennDOT and NJDOT to establish two- and four-year emissions reduction targets from CMAQ funded projects in the relevant portions of the DVRPC planning area for the period 2022-2025. Each state has developed state-level emissions reductions targets that account for emissions reductions at the MPO level. DVRPC has adopted the MPO regional targets and supported the statewide emissions reductions targets with the baseline and target setting report submitted to FHWA in 2022.⁴

For this interim period performance plan, which addresses the first two years of the second PM3 performance period (2022–2023), staff collaborated with the state DOTs and other MPOs in the states to review the actual emissions measure performance values and discussed adjusting the four-year targets.

In Pennsylvania, staff discussed the emissions performance and targets through interagency email and at the Pennsylvania Air Quality Working Group meeting held on August 15, 2024. The Pennsylvania MPOs required to submit PM3 Performance Reports and PennDOT participated in these discussions. It was decided through these discussions that DVRPC and PennDOT would not revise the four-year performance targets.

In New Jersey, DVRPC staff participated in two virtual meetings, on July 10, and July 30, 2024, with NJDOT and the other MPOs in New Jersey to discuss the emissions measure performance and targets. It was decided through these discussions that DVRPC and NJDOT would not revise the four-year performance targets.

The following sections demonstrate DVRPC’s progress towards these targets in the first two years (2022-2023) of this performance period (2022-2025).

Pennsylvania

DVRPC coordinated efforts to develop the on-road mobile source emissions targets in collaboration with PennDOT. The coordination procedures are detailed in PennDOT’s PM2 and PM3 target setting letter submitted to FHWA in December 2022. DVRPC supported the PennDOT on-road mobile emissions reductions targets for CMAQ funded projects.

The two-year progress toward meeting these targets in the Pennsylvania portion of the DVRPC planning area were extracted directly from the FHWA CMAQ PAS as required by 23 CFR 490.⁵ The two-year performance and two-

⁴ DVRPC, “CMAQ Final Performance Plan.”

and four-year targets are presented in Table 11. Meeting these targets requires a two-year performance value that is greater than the target.

Table 11: On-Road Emissions Reductions Performance and Targets for the DVRPC Planning Area in Pennsylvania (2022-2023)

| Pollutant | Emissions Reduction (Kg/day) | | | |
|-----------------------------------|------------------------------|----------------------|-----------|------------------|
| | FY2022–2023 | FY2022–2023 | Target | FY2022–2025 |
| | Two-year Target | Two-year Performance | Achieved? | Four-year Target |
| VOC Emissions | 9.66 | 6.86 | No | 19.32 |
| NO_x Emissions | 51.28 | 101.20 | Yes | 102.56 |
| PM_{2.5} Emissions | 4.07 | 7.85 | Yes | 8.14 |

Source: FHWA PAS 2024 and PennDOT 2024

The two-year emissions reductions were considerably higher than the two-year targets for NO_x and PM_{2.5} but did not meet the two-year VOC target. CMAQ emissions are based on the modeled benefits of CMAQ funded projects that are considered “new” in each year. New projects are entered in the PAS in the first year the project is obligated for funding. Funding allocated to projects that “continue” from a previous year, or are receiving CMAQ funds after the first year of obligation, are not considered to support target achievement. This makes it difficult to set and track progress to achieving targets.

Since emissions reduction benefits are only entered into the PAS for the first year that a project is obligated for funding, delays in funding schedules present challenges in forecasting when a project’s benefits will be included in the PAS and contribute toward the targets.

Recent challenges with meeting the Buy America provisions for medium- and heavy-duty diesel vehicles have resulted in fewer of these types of projects being selected for CMAQ funding. These projects typically exhibited considerable emissions reductions benefits that contributed towards meeting the targets. Difficulty in obligating funds for these projects poses an additional challenge to meeting targets.

Finally, increases in fuel economy and vehicle emissions controls have resulted in declining emissions reductions from CMAQ funded projects. Reductions in travel times, delay, and VMT do not demonstrate the same level of benefits from today’s cleaner fleets as similar projects demonstrated in the past.

While PennDOT and DVRPC have decided to not adjust the four-year targets, DVRPC will continue to fund and program cost effective CMAQ projects with the goal of meeting the established targets.

New Jersey

DVRPC coordinated efforts to develop the on-road mobile source emissions targets with NJDOT and the other MPOs in New Jersey. The coordination procedures are detailed in NJDOT’s submission of the state targets for the PM₃ performance measures submitted to FHWA in October 2022. DVRPC has adopted the MPO regional targets that were used to develop the NJDOT on-road mobile emissions reductions targets for CMAQ-funded projects in the DVRPC planning area in New Jersey and has supported the New Jersey state targets.

During the coordination meetings between NJDOT and the MPOs to review the interim period emissions performance measure, it was determined that a number of projects, particularly statewide CMAQ funded projects, were entered into the FHWA PAS as “continuing projects” and therefore did not contribute toward meeting the established two-year emissions reductions goals. Further discussion revealed that while many of these projects were line item programs with continuing state project identification numbers (known as DB numbers in New Jersey), the scope of many of these projects changed significantly enough from year to year to warrant re-evaluation for the emissions benefits.

The MPOs identified projects where this situation applied and provided emissions reduction values for the MPO projects and NJDOT identified statewide projects that could be analyzed for consideration for this performance planning period. DVRPC is assigned 20.5 percent of the benefits of statewide projects based on the region’s share of statewide VMT.

NJDOT and the New Jersey MPOs will work with FHWA to correct PAS entries for 2022-2023 and develop a plan to insure CMAQ-funded projects are properly classified, analyzed for emissions reductions, and reported in the PAS system to avoid this situation in the future.

Table 12 identifies the emissions reduction benefits that are reported in the PAS and also the additional benefits that were identified through the re-evaluation of continuing projects. Each project that contributes emissions benefits are identified in Table 16. Table 16 also notes whether the project’s benefits were recorded in the PAS and contributed to the targets or was re-evaluated for benefits after the state consultation meetings.

Table 12: Reported and Adjusted On-Road Emissions Reductions for the DVRPC Planning Area in New Jersey (2022-2023)

| Pollutant | Emissions Reduction (kg/day) as Reported in FHWA CMAQ PAS Database* | Adjusted Emissions Reduction(kg/day) Including Updated Analysis |
|-----------------------------|--|--|
| VOC Emissions | 1.317 | 4.134 |
| NO _x Emissions | 2.131 | 9.00 |
| PM _{2.5} Emissions | 0.177 | 0.77 |

Source: FHWA PAS 2024 and NJDOT 2024

*This number includes both the DVRPC local CMAQ projects and the DVRPC share of the benefits of statewide projects reported in the PAS.

The region does not meet the two-year targets for VOC, NO_x, or PM_{2.5}. Even with the additional reported benefits, the region would not meet the two-year targets for NO_x and PM_{2.5}. As explained above, New Jersey’s two-year CMAQ emissions target shortfall can be largely attributed to the lack of quantitative assessment of obligated CMAQ projects. The use of a qualitative approach resulted in a perceived deficit of emissions reductions benefits from obligated CMAQ projects.

The emissions reductions targets and performance as reported in the PAS are presented in Table 13.

Table 13: On-Road Emissions Reductions Performance and Targets for the DVRPC Planning Area in New Jersey (2022-2023)

| Pollutant | Emissions Reduction (Kg/day) | | | |
|-----------------------------------|------------------------------|----------------------|-----------|------------------|
| | FY2022–2023 | FY2022–2023 | Target | FY2022–2025 |
| | Two-year Target | Two-year Performance | Achieved? | Four-year Target |
| VOC Emissions | 2.844 | 1.317 | No | 5.41 |
| NO_x Emissions | 9.506 | 2.131 | No | 17.50 |
| PM_{2.5} Emissions | 24.252 | 0.177 | No | 45.96 |

Source: NJDOT 2024

Despite missing the two-year targets, NJDOT and the state MPOs agreed to not adjust the four-year targets. NJDOT has proposed the following actions to ensure that CMAQ projects are properly analyzed, entered into the PAS, and accounted for to show progress toward meeting the four-year on-road emissions reductions targets:

- NJDOT will establish a schedule to host NJ Air Quality Working Group meetings, which will occur as conference calls on a quarterly schedule to ensure adherence to scheduling, data gathering, and technical analysis requirements. NJDOT will facilitate CMAQ coordination and establish roles and responsibilities for each partner in the CMAQ emission analysis process. The coordination with MPOs and other relevant agencies in the CMAQ targets evaluation and project selection will include NJDOT, the New Jersey Department of Environmental Protection, the U.S. Environmental Protection Agency, FHWA, NJ Transit, DVRPC, SJTPO, NJTPA, and the consulting team.
- Future CMAQ project analyses will utilize quantitative methodologies in addition to the qualitative assessment of emissions reduction benefits of CMAQ-funded projects.
- NJDOT and its partner agencies will exclusively approve CMAQ projects with a demonstrated emissions reduction benefit, as established using the quantitative methodologies.
- NJDOT will utilize the FHWA CMAQ toolbox and similar approved methodologies to calculate project emissions reduction benefits.
- NJDOT will pursue project authorizations more rigorously to ensure projects are authorized and move forward in a timely manner.

DVRPC will work with NJDOT on an improved emission analysis process and coordination with partner agencies to meet New Jersey’s four-year CMAQ emission benefit goals. Following the above proposed actions, NJDOT’s air quality planning team proposes to keep the existing four-year CMAQ emission targets and expects to meet or exceed emission benefits from the proposed CMAQ projects for the next evaluation cycle.

CHAPTER 3:

Achieving the Targets

According to FHWA guidance for preparing the MPO CMAQ performance report, MPOs must present a description of projects identified for funding during the performance period (federal FY2022–2023 and FY2022–2025). Included with the project descriptions should be a further description of how the projects will help the MPO meet the two- and four-year targets for traffic congestion and on-road mobile source emissions.

The requirements for preparation of the interim performance plan further mandate that a description should be given to explain projects that contributed to the two-year targets, and explain additions, deletions, and revisions to projects included in the MPOs baseline performance plan.

Tables 14 through 17 meet this requirement by listing CMAQ-funded projects from the relevant TIPs for each state organized by project type and the state project identification number (known as MPMS number in Pennsylvania and DB number in New Jersey).

Tables 14 (Pennsylvania) and 16 (New Jersey) identify all the projects that were reported in the FHWA CMAQ PAS in FY2022 and FY2023 along with the emissions reductions associated with that project. The tables also indicate if the projects contribute toward the congestion measure targets.

Tables 15 (Pennsylvania) and 17 (New Jersey) detail the status of the projects that were listed in the DVRPC TIPs for each year for funding in the performance period. The tables detail whether the project is continuing, contributed toward the first two-year targets, or if the project is planned for the future. As explained previously, some projects that are listed as continuing may have significant scope changes that warrant re-evaluation of benefits. The last category of projects in these tables are line items that do not have projects associated with them but are financial placeholders in the TIPs. Individual projects are assessed for benefits as they are developed with funding from the line items.

Table 18 provides the definitions of the benefits for the project types used in Tables 15 and 17.

Conclusion

DVRPC is committed to coordinating with the state DOTs and other MPOs in the shared UZAs and air quality nonattainment and maintenance areas to establish performance targets and work towards meeting the goals of the CMAQ program.

DVRPC will continue to coordinate with the state DOTs to program cost-effective congestion and emissions reducing projects with CMAQ funds and develop standard procedures for accounting for these project benefits throughout the region

Table 14: CMAQ-Funded Projects in the Pennsylvania Portion of the DVRPC Region (2022–2023) Contributing to the Emissions Reduction Target

| MPMS | Project Title | Project Type | FHWA Public Access System Report Year | Emissions Benefit (Kg/d) | | | PHED Benefit | Non-SOV Benefit |
|--------|---|--|---------------------------------------|--------------------------|-----------------|-------------------|--------------|-----------------|
| | | | | VOC | NO _x | PM _{2.5} | | |
| 64791 | Kedron and Franklin Avenues | Congestion Reduction and Traffic Flow Improvements | 2023 | 0.04 | 0.14 | 0.01 | Yes | No |
| 65109 | Transit Flex — SEPTA | Transit Improvements | 2022 | 1.99 | 50.28 | 0.1 | Yes | Yes |
| 98207 | I-95 Congestion Management | Transit Improvements | 2022 | 1.69 | 33.9 | 1.26 | Yes | Yes |
| 105845 | Bridge Street Crossing — D&L Canal Towpath | Bicycle and Pedestrian Facilities and Programs | 2022 | 0.0 | 0.03 | 0.03 | Yes | Yes |
| 106264 | Penn's Landing Project Development | Bicycle and Pedestrian Facilities and Programs | 2023 | 0.18 | 0.18 | 0.01 | Yes | Yes |
| 107632 | Fox Chase Trail | Bicycle and Pedestrian Facilities and Programs | 2022 | 0.0 | 0.02 | 0.02 | Yes | Yes |
| 107634 | Media Borough Pedestrian Enhancements | Bicycle and Pedestrian Facilities and Programs | 2023 | 0.11 | 0.12 | 0.01 | Yes | Yes |
| 110415 | Schuylkill Banks Trail — Christian–Crescent | Bicycle and Pedestrian Facilities and Programs | 2022 | 0.07 | 0.04 | | Yes | Yes |
| 111005 | Conshohocken Garage | Transit Improvements | 2023 | 1.10 | 2.76 | 0.19 | Yes | Yes |
| 114112 | Media Bypass ITS | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.868 | 7.788 | 1.41 | Yes | No |
| 114116 | Skippack Pike Signal System | Congestion Reduction and Traffic Flow Improvements | 2023 | 0.22 | 0.84 | 0.01 | Yes | No |
| 114164 | Nutt Road and Starr Street Improvements | Congestion Reduction and Traffic Flow Improvements | 2023 | 0.05 | 0.14 | 0.01 | Yes | No |
| 114167 | Naamans Creek Road and US-202 | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.088 | 1.143 | 0.294 | Yes | No |
| 114173 | Roosevelt Boulevard Crossover Lanes | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.01 | 0.156 | 0.035 | Yes | No |

| MPMS | Project Title | Project Type | FHWA Public Access System Report Year | Emissions Benefit (Kg/d) | | | PHED Benefit | Non-SOV Benefit |
|---------------|--|--|---------------------------------------|---------------------------|-----------------|-------------------|--------------|-----------------|
| | | | | VOC | NO _x | PM _{2.5} | | |
| 114174 | Indego 2.0 Bike Share | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.01 | 0.2 | 0.17 | Yes | Yes |
| 115964 | Transportation Operations 2022-23 | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.39 | 2.82 | 3.84 | Yes | No |
| 115966 | CMAQ Project Engineering and Management 2022-23 | Congestion Reduction and Traffic Flow Improvements | 2023 | Qualitative Analysis (QA) | QA | QA | Yes | Yes |
| 115970 | Air Quality Action Supplemental Services 2022-23 | Congestion Reduction and Traffic Flow Improvements | 2022 | 0.04 | 0.64 | 0.45 | Yes | Yes |
| Totals | | | | 6.86 | 101.19 | 7.85 | | |

Source DVRPC 2024

Table 15: Interim Performance Period Status CMAQ-Funded Projects in the Pennsylvania Portion of the DVRPC Region (2022–2023)

| MPMS | Project Title | Project Type* | TIP Program Year | Status |
|-------|--|---------------------------------------|------------------|--|
| 16334 | Church Road Greenwood-Rice's Mill | Congestion Reduction and Traffic Flow | 2023 | Expected Obligation in 2025 |
| 16705 | Chester Valley Trail Extension | Bicycle and Pedestrian | 2022–23 | Continuing |
| 17697 | Island Avenue: Elmwood to Suffolk | Congestion Reduction and Traffic Flow | 2022–23 | Continuing |
| 17900 | Regional Share a Ride Mobility Alternatives Program | Travel Demand Management | 2022–23 | Continuing |
| 17928 | Ozone Action Program | Travel Demand Management | 2023 | Continuing with new benefits |
| 47994 | US-13: Morton–Wycombe | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 48186 | Pottstown Signal System | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 48199 | Transportation Management Association Program 5 TMA's in Philadelphia Region | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 48201 | DVRPC Competitive CMAQ Program | Various | 2024–2025 | Line-item program |
| 51095 | ITS Program Integrator Segment D | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 57635 | Quakertown Closed Loop Signal System | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 57635 | Quakertown Closed-Loop Signal System | Congestion Reduction and Traffic Flow | 2024 | Let for construction |
| 57641 | Bustleton and Bridgetown Pikes | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 57851 | Plank, Otts, Meyers, and Seitz Roads | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 59434 | Schuylkill River Trail | Bicycle and Pedestrian | 2022 | Continuing |
| 59522 | Montgomery County ITS System | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 63406 | On Road Bike Retrofit | Bicycle and Pedestrian | 2022 | Continuing with new benefits |
| 64790 | MacDade Boulevard at South Avenue | Congestion Reduction and Traffic Flow | 2022–23 | Continuing |
| 64791 | Kedron and Franklin Avenues | Congestion Reduction and Traffic Flow | 2023 | Included in 2023 PAS |
| 65109 | Transit Flex - SEPTA | Transit | 2022–23 | Included in 2022 PAS. Continuing with new benefits |
| 66461 | CMAQ Project Engineering and Management | Congestion Reduction and Traffic Flow | 2022 | Line- item program |

| MPMS | Project Title | Project Type* | TIP Program Year | Status |
|---------------|---|---------------------------------------|-------------------------|--|
| 66461 | CMAQ Project Engineering and Management | Various | 2022 | Continuing |
| 81227 | Pennsylvania Air Quality Action Supplemental Services | Education and Outreach | 2024 | Continuing with new benefits |
| 81232 | Transportation Operations | Traffic Incident Management | 2024 | Continuing with new benefits |
| 84318 | CAQ Reserve Line Item | Various | 2024 | Line-item program |
| 84318 | CAQ Reserve Line Item | Various | 2025 | Line-item program |
| 84318 | CAQ Reserve Line Item | Various | 2022–23 | Line-item program |
| 84457 | Signal Retiming Program | Congestion Reduction and Traffic Flow | 2025 | Continuing with new benefits |
| 93106 | Philadelphia Transportation Operations Center | Congestion Reduction and Traffic Flow | 2022 | Expecting obligation |
| 96213 | Manayunk Bridge Trail | Bicycle and Pedestrian | 2023 | Continuing |
| 96215 | City Avenue Adaptive Signals | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 96223 | Philadelphia Signal Retiming | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 98207 | I-95 Congestion Management | Transit | 2022 | Included in 2022 PAS. Continuing with new benefits |
| 102273 | Ridge and Germantown Pikes Intersection Realignment - Phase 1, Perkiomen Crossing | Congestion Reduction and Traffic Flow | 2024–25 | Expected construction in 2025 |
| 102278 | Newtown Bypass Adaptive Signals | Congestion Reduction and Traffic Flow | 2022 | Let for construction |
| 105291 | The Circuit Line Item | Bicycle and Pedestrian | 2024–25 | Expected construction in 2026 |
| 105845 | Bridge Street Crossing — D&L Canal Towpath | Bicycle and Pedestrian | 2023-2022 | Included in 2022 PAS |
| 106264 | Penn's Landing Project Development | Bicycle and Pedestrian | 2023 | Included in 2023 PAS |
| 107630 | Paoli Pike Trail — Segments D–E | Bicycle and Pedestrian | 2023 | Continuing |
| 107632 | Fox Chase Lorimer Trail | Bicycle and Pedestrian | 2023–22 | Included in 2022 PAS |
| 107634 | Media Borough Pedestrian Enhancements | Bicycle and Pedestrian | 2023 | Included in 2023 PAS |
| 107637 | Roosevelt Boulevard Rapid Transit | Transit | 2023 | Continuing |
| 107639 | Route 3 Adaptive Signal Controls | Congestion Reduction and Traffic Flow | 2023 | Continuing |
| 107642 | Smithbridge Road Corridor Improvement | Bicycle and Pedestrian | 2022 | Continuing |

| MPMS | Project Title | Project Type* | TIP Program Year | Status |
|---------------|--|---------------------------------------|-------------------------|--|
| 107646 | West Main Street Signals | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 107654 | CNG Philadelphia | Alternative Fuels and Vehicles | 2022 | Continuing |
| 110415 | Schuylkill Banks Trail — Christian–Crescent | Bicycle and Pedestrian | 2022 | Included in 2022 PAS |
| 110460 | Commuter Services/MAP Shared Ride | Travel Demand Management | 2022 | Continuing |
| 111005 | Conshohocken Garage | Transit | 2023 | Included in 2023 PAS |
| 111024 | Easton Road Roundabouts | Congestion Reduction and Traffic Flow | 2024 | Let for construction |
| 111424 | Transportation Management Associations | Travel Demand Management | 2024 | Continuing with new benefits |
| 112977 | TMA Competitive Grant Program | Travel Demand Management | 2023 | Line-item program |
| 114102 | West Chester Pike and I-476 | Congestion Reduction and Traffic Flow | 2023 | Continuing |
| 114112 | Media Bypass ITS | Congestion Reduction and Traffic Flow | 2022–23 | Included in 2022 PAS |
| 114114 | Conshohocken State and Spring Mill Roads | Congestion Reduction and Traffic Flow | 2022 | Continuing |
| 114116 | Skippack Pike Signal System | Congestion Reduction and Traffic Flow | 2023 | Included in 2023 PAS |
| 114164 | Nutt Road and Starr Street Improvements | Congestion Reduction and Traffic Flow | 2023 | Included in 2023 PAS |
| 114166 | PA-401 and Valley Hill Road Improvement | Congestion Reduction and Traffic Flow | 2023 | Continuing |
| 114167 | Naamans Creek Road and US-202 | Congestion Reduction and Traffic Flow | 2022 | Included in 2022 PAS |
| 114172 | Dreshertown Road Cross County Trail Extension | Bicycle and Pedestrian | 2024 | Expected construction in 2025 |
| 114173 | Roosevelt Boulevard Crossover Lanes | Congestion Reduction and Traffic Flow | 2022 | Included in 2022 PAS |
| 114174 | Indego 2.0 Bike Share | Congestion Reduction and Traffic Flow | 2022–24 | Included in 2022 PAS |
| 114939 | Regional TDM Program | Travel Demand Management | 2024 | Continuing with new benefits |
| 115620 | Commuter Assistance After COVID-19 | Travel Demand Management | 2023 | Continuing |
| 115964 | Transportation Operations 2022–23 | Congestion Reduction and Traffic Flow | 2022–23 | Included in 2023 PAS. Continuing with new benefits |
| 115966 | CMAQ Project Engineering and Management 2022–23 | Congestion Reduction and Traffic Flow | 2023 | Included in 2023 PAS |
| 115970 | Air Quality Action Supplemental Services 2022–23 | Congestion Reduction and Traffic Flow | 2022–23 | Continuing with new benefits |

| MPMS | Project Title | Project Type* | TIP Program Year | Status |
|--------|---|------------------------|------------------|-------------------------------|
| 118015 | CMAQ Flex for SEPTA Projects of Significance Line Item | Transit | 2025 | Continuing with new benefits |
| 118494 | Eastern Delaware County Bikeway Implementation Plan | Bicycle and Pedestrian | 2024 | Expected construction in 2025 |
| 118496 | The Woodland Avenue Trolley Portal Complete Streets Project | Bicycle and Pedestrian | 2024 | Expected construction in 2025 |

Source: DVRPC 2024

Table 16: CMAQ-Funded Projects in the New Jersey Portion of the DVRPC Region (2022–2023) Contributing to the Emissions Reduction Target

| DB Num. | Project Title | Project Type | FHWA Public Access System Report Year | Emissions Benefit (Kg/d) | | | PHED Benefit | Non-SOV Benefit | Notes/Status |
|----------------------------------|---|----------------------|---------------------------------------|--------------------------|-----------------|-------------------|--------------|-----------------|--|
| | | | | VOC | NO _x | PM _{2.5} | | | |
| X065 | Local CMAQ Initiatives — DVRPC Hamilton Avenue Intersection | Bicycle / Pedestrian | 2022 | 0.226 | 0.065 | 0.003 | Yes | Yes | Included in the CMAQ PAS |
| D1601 | NJ Regional Signal Retiming Initiative | ITS | 2022 | 1.391 | 3.459 | 0.296 | Yes | No | Not included in CMAQ PAS; re-evaluated during performance report consultation |
| D1601 | NJ Regional Signal Retiming Initiative | | 2023 | 1.425 | 3.409 | 0.296 | Yes | No | Not included in CMAQ PAS; re-evaluated during performance report consultation |
| Statewide Program | | | | | | | | | |
| T112 | Rail Rolling Stock Replacement | Transit | 2022 | 1.091 | 2.066 | 0.174 | Yes | Yes | NJ DOT allocates 20.5 percent of the emissions benefits of this statewide CMAQ project to the MPO based on VMT share. These values represent the emissions benefits allocated to the DVRPC region. Included in the 2022 PAS. |
| Total (PAS reported only) | | | | 1.317 | 2.131 | 0.177 | | | These are the benefits from the projects that were reported in the FHWA PAS. |

| DB Num. | Project Title | Project Type | FHWA Public Access System Report Year | Emissions Benefit (Kg/d) | | | PHED Benefit | Non-SOV Benefit | Notes/Status |
|-------------------------|---------------|--------------|---------------------------------------|--------------------------|-----------------|-------------------|--------------|-----------------|---|
| | | | | VOC | NO _x | PM _{2.5} | | | |
| Total (Adjusted) | | | | 4.134 | 9.003 | 0.770 | | | These are the total emission benefits when the revised emissions and projects are considered. |

Source: NJ DOT 2024

Table 17: Interim Performance Period Status CMAQ-Funded Projects in the New Jersey Portion of the DVRPC Region (2022–2023)

| DBNUM | Project Title | Project Type* | TIP Program Year | Status |
|-------|--|--------------------------------|------------------|--------------------------------|
| D0407 | Ozone Action Program in New Jersey | Education / Outreach | 2024-25 | Continuing with new benefits |
| D0601 | Camden County Bus Purchase | Transit | 2024 | Expected Obligation in 2024 |
| D1101 | Mercer County Bus Purchase | Transit | 2024 | Expected Obligation in 2024 |
| D1510 | Burlington County Bus Purchase | Transit | 2024 | Expected Obligation in 2024 |
| D1601 | New Jersey Signal Timing Initiative | Signal/ITS | 2024-25 | Included in 2022 PAS |
| D2005 | Regional TDM Program | Education / Outreach | 2024-25 | Continuing with new benefits |
| D9807 | Gloucester County Bus Purchase | Transit | 2024 | Expected Obligation in 2024 |
| X065 | Local CMAQ Initiatives — DVRPC Hamilton Avenue Intersection | Bicycle / Pedestrian | 2022 | Included in 2022 PAS |
| X065 | Local CMAQ Initiatives Princeton Pike Traffic Flow Mitigation Improvements | Signal/ITS | 2024 | Expected Obligation in 2024 |
| X065 | Local CMAQ Initiatives Route 130 Camden County Link Trail Bike/Ped Bridge | Bike/Ped Improvement | 2025 | Expected Obligation in 2025 |
| X065 | Local CMAQ Initiatives—Mercer County Maidenhead Meadows Trail | Bike/Ped Improvement | 2022 | Expected Obligation after 2025 |
| X065 | Local CMAQ Initiatives – Gloucester Township's Bicycle Trail | Bike/Ped Improvement | 2022 | Expected Obligation after 2025 |
| X065 | Local CMAQ Initiatives—Voorhees Township Access to the PATCO Station | Bike/Ped Improvement | 2023 | Expected Obligation in 2025 |
| X065 | Local CMAQ Initiatives—NJ DEP E-mobility project | Alternative Fuels and Vehicles | 2022 | Expected Obligation after 2025 |
| X065 | Local CMAQ Initiatives—NJ DEP It Pays to Plug In | Alternative Fuels and Vehicles | 2025 | Expected Obligation after 2025 |

| DBNUM | Project Title | Project Type* | TIP Program Year | Status |
|--------------|--|--------------------------------|-------------------------|--------------------------------|
| X065 | Local CMAQ Initiatives – NJ DEP Emergency Medical Vehicle anti-idling campaign | Alternative Fuels and Vehicles | 2025 | Expected Obligation after 2025 |
| T112 | Rail Rolling Stock Procurement (Statewide) | Transit | 2024-25 | Continuing with new benefits |
| T120 | Small /Special Services Program | Transit | 2022 | No longer funded with CMAQ |
| T150 | Section 5310 Program | Transit | 2022 | No longer funded with CMAQ |
| X185 | Bicycle & Pedestrian Facilities (Statewide) | Bike/Ped Improvement | 2024-25 | Line item program |
| 15343 | Intelligent Traffic Signal program (Statewide) | Signal/ITS | 2024-25 | Continuing with new benefits |
| 17419 | US 1, Alexander Road to Mapleton Road | Intersection Improvement | 2022 | Expected Obligation after 2025 |
| 18353 | Route 295, Sloan Avenue (CR 649) Princeton Pike (CR 583) | Intersection Improvement | 2025 | PE Phase in 2025 |
| 22355 | CMAQ Initiatives (Statewide) | Various | 2024-25 | Line-item program |

Source: DVRPC 2024

Table 18: Benefits by Project Type

| Project Type | Emissions Benefit | Traffic Congestion Benefit (PHED) | Traffic Congestion Benefit (% Non-SOV Travel) |
|--|--|---|--|
| Alternative Fuels and Vehicles | Emissions are reduced and air quality is improved through the replacement of older equipment with cleaner and more efficient alternatives. | N/A | N/A |
| Bicycle and Pedestrian Improvement | Bicycle and pedestrian facilities will help reduce emissions by providing active transportation links to employment and shopping centers. | These active transportation connections reduce congestion by providing alternatives to SOV travel. | These active transportation connections reduce congestion by providing alternatives to SOV travel. |
| Congestion Reduction and Traffic Flow | Emissions are reduced by reducing congestion and improving traffic flow along roadways. | Congestion is reduced by improving traffic operations through signal retiming, intersection channelization, and/or geometry improvements. | N/A |
| Education and Outreach | Emissions are reduced by encouraging alternative commuting patterns and increased transit use resulting in a reduction in SOV travel. | Congestion is reduced by encouraging alternative commuting patterns and increased transit use resulting in a reduction in SOV travel. | SOV travel is reduced by encouraging alternative commuting patterns and increased transit use. |
| Traffic Incident Management | Emissions are reduced by improving traffic flow along roadways | Congestion is reduced through improved responses to traffic incidents | N/A |
| Transit | More efficient transit vehicles and reductions in SOV travel due to improved transit service will reduce emissions. | Transit service reduces traffic congestion by providing an alternative to SOV travel. | Transit service provides an alternative to SOV travel. |
| Travel Demand Management | Emissions are reduced by decreasing SOV travel. | Traffic congestion is reduced by providing alternatives to SOV travel. | SOV travel is reduced by encouraging the use of alternative means of transportation. |
| Various | This project is a line item for CMAQ initiatives and will have varying benefits based on the final funded project. | This project is a line item for CMAQ initiatives and will have varying benefits based on the final funded project. | This project is a line item for CMAQ initiatives and will have varying benefits based on the final funded project. |

Source: DVRPC 2024

Congestion Mitigation and Air Quality Program Interim Performance Plan (2022–2023)

Publication Number: 25117

Date Published: September 2024

Geographic Area Covered:

Portions of the Philadelphia, Trenton, Allentown, and New York Urbanized Area that comprise 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 counties in New Jersey.

Key Words:

Congestion Mitigation and Air Quality, CMAQ, Performance Measures, Transportation Performance Management, Congestion, Peak Hour Excessive Delay, Percent Non-Single Occupancy Vehicle Travel, On-road Mobile Emissions, PM₃, State Performance Measure Targets, Nonattainment Area, Maintenance Area, Volatile Organic Compounds (VOCs), Nitrogen Oxides (NO_x), Fine Particulate Matter (PM_{2.5})

Abstract:

Metropolitan Planning Organizations are required to adopt CMAQ emissions and congestion targets and develop a four-year performance plan as part of the federally mandated Transportation Performance Management process. MPOs are required to report on progress towards the four-year targets in an interim period report. This technical memo serves as the interim performance report to FHWA for the period 2022–2023 for the congestion measures for the Philadelphia, Trenton, Allentown and New York Urbanized Areas and the on-road mobile emissions performance measures in the DVRPC Planning Area.

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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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