CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ) PERFORMANCE PLAN FOR THE NJDOT MID PERFORMANCE PERIOD REPORT 2022-2025 PERFORMANCE PERIOD

September 2024

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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Title VI Compliance

The NJTPA is committed to seeking input from those who have been historically under-represented in transportation planning decisions. Federal legislation such as the Americans with Disabilities Act (ADA) and Title VI of the Civil Rights Act of 1964 have public participation requirements that MPOs must implement to ensure access to the planning process for protected populations. To meet these requirements, the NJTPA takes steps to include people with disabilities, minority, and low-income populations, and those with limited English proficiency (LEP) which are discussed throughout the PEP. In accordance with the Federal Transit Administration Title VI circular, FTA C 4702.1B, the PEP serves as the NJTPA's outreach plan for minority and limited English proficient populations. In accordance with Executive Order 12898 on Environmental Justice, the NJTPA has integrated environmental justice concerns across all of its planning activities. This includes efforts to ensure that transportation benefits and burdens are distributed equally among all people in the region, in part by making concerted efforts to involve low-income and minority residents in transportation planning. The NJTPA also encourages participation in its CMAQ program those traditionally underserved by existing transportation systems, including, but not limited to, low income and minority households.

STATE: New Jersey

URBANIZED AREAS: New York–Newark, NY–NJ–CT Urbanized Area,
Philadelphia, PA–NJ–DE–MD Urbanized Area
Allentown–Bethlehem–Easton, PA–NJ Urbanized Area

INTRODUCTION

This performance plan supports the Congestion Mitigation and Air Quality Improvement (CMAQ) Program in the North Jersey Transportation Planning Authority (NJTPA) region, particularly by using associated national performance measures. The plan accompanies the mid period performance report prepared by the New Jersey Department of Transportation (NJDOT) for the 2022-2025 performance period. Reflecting an extensive and cooperative planning process, the document details established (and revised) performance targets for the NJTPA region and applicable urbanized areas. It also describes progress achieved toward those targets, and projects identified for CMAQ funding during the remaining half of the current performance period.

BACKGROUND

The NJTPA is the federally authorized Metropolitan Planning Organization (MPO) for 7 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees more than $3 billion in transportation improvement projects and provides a forum for interagency cooperation and public input. It also sponsors and conducts studies, assists county planning agencies, and monitors compliance with national air quality goals. The NJTPA maintains a performance-based decision-making process. This strategic approach relies on data, performance measurement, forecasting, and analysis to make effective decisions on investment, making sure to support regional planning goals and federal, state, and local priorities. The NJTPA's Regional Capital Investment Strategy and Project Prioritization Criteria exemplify the approach. Additional elements include the identification of CMAQ projects and broader performance measure monitoring.

The NJTPA is part of the New York–Newark, NY–NJ–CT urbanized area (UZA), which has a population of over 19 million people. The NJTPA also has a small overlap with (and contains National Highway System (NHS) roadways within) two additional UZAs: the Philadelphia, PA–NJ–DE–MD UZA, which has a population of approximately 5.7 million; and the Allentown–Bethlehem–Easton, PA–NJ UZA, with approximately 700,000 people.

Because the NJTPA region contains designated nonattainment and maintenance areas[1] that overlap an urbanized area with a population above 1 million, regulations[2] require that the NJTPA prepare this CMAQ Performance Plan. Portions of the NJTPA region are in nonattainment or maintenance for the criteria pollutants of ozone, fine particulate matter ($PM_{2.5}$) and carbon monoxide (CO). The entire NJTPA region is part of the New York-Northern New Jersey-Long Island, NY–NJ– CT 8-hour ozone nonattainment area and the Philadelphia-Wilmington-Atlantic City, PA–NJ–MD–DE 8-hour ozone nonattainment area. Nine NJTPA counties are part of the New York-Northern New Jersey-Long Island, NY–NJ–CT annual and daily $PM_{2.5}$ maintenance areas, and four counties (plus a portion of a fifth) are part of the New York-Northern New Jersey-Long Island, NY–NJ–CT CO maintenance area.

[1] As of October 2023, when USDOT completed its applicability determination.
[2] 23 CFR 490.107(c)(3)

Figure 1: Maintenance and Nonattainment Areas in the NJTPA Region (map)

This report is part of the Mid Performance Period Progress Report for the second Performance Period, so it reflects the baseline performance, along with the two-year and four-year targets established in 2022. The baseline CMAQ Performance Plan for the second performance period was submitted on October 1, 2022. See below (Figure 2) for details on reporting requirements.

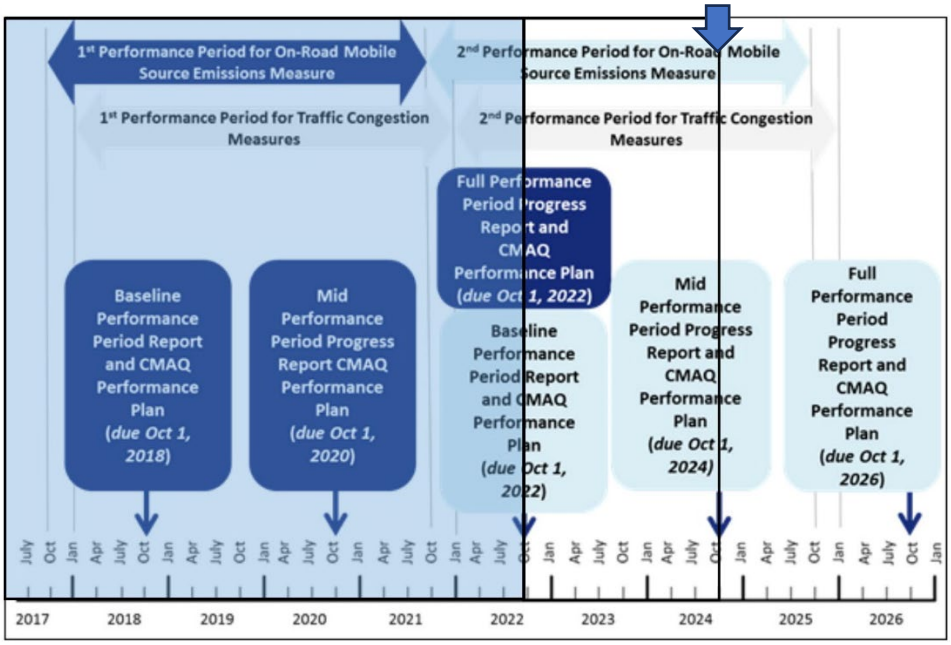

Figure 2: Performance Periods for CMAQ Measures and Reports Timeline
Source: FHWA

PERFORMANCE MEASURES

The CMAQ Performance Plan is required to include three performance measures. Two address traffic congestion, aggregated at the UZA level: **percent non-single occupant vehicle (non-SOV) travel**, and **peak hour excessive delay (PHED) per capita**. The third measure addresses **total criteria pollutant emissions reductions from CMAQ projects**, for the NJTPA region (specifically tied to corresponding nonattainment or maintenance areas for those pollutants).

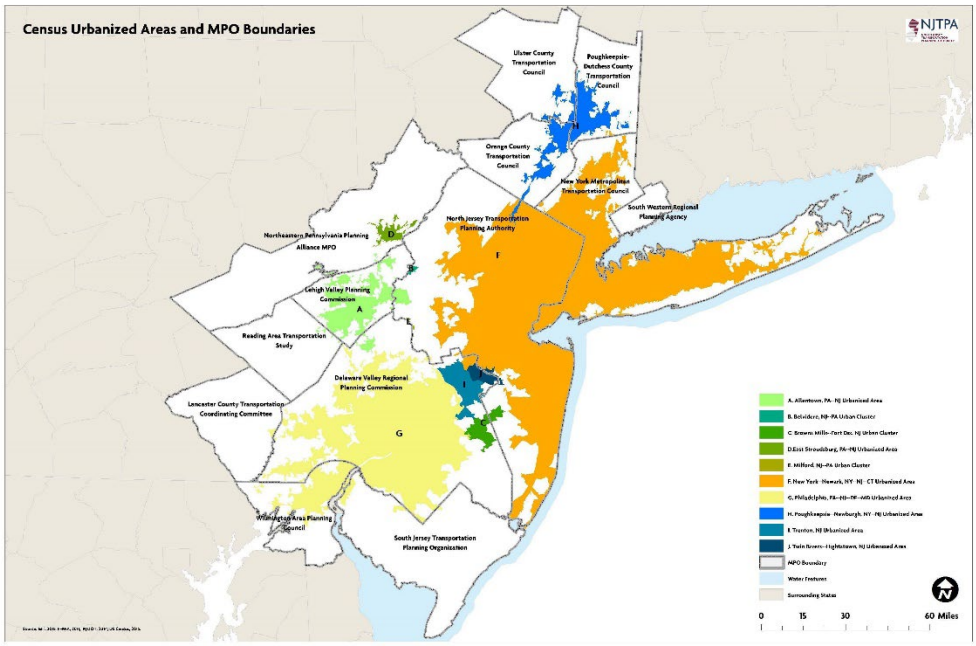

Figure 3: Census Urbanized Areas (UZA) in the NJTPA Region (map)

The three measures were evaluated to assess the mid performance period condition/performance as described below. The measures were also analyzed to collaboratively assess existing two- and four-year UZA traffic congestion targets and NJTPA region pollutant emissions reductions targets and propose modifications to the existing four-year targets. Finally, the plan's list of future CMAQ projects specifically identifies how those projects should help to achieve the congestion and emissions targets in the next two-year period.

Percent non-SOV Travel

This performance measure recognizes the role that single-occupant vehicles play in contributing to traffic congestion and pollutant emissions. **Percent non-SOV travel** for the urbanized area is calculated using U.S. Census American Community Survey (ACS) 5-year data about journey-to-work trips. Non-SOV includes carpool, train, bus, walk, bike, taxi, rideshare, working at home, etc. — anything other than driving alone.

Annual Hours of PHED Per Capita

This is a measure of congestion on all NHS roadways (mostly roads that are principal arterials or greater functional class) in each UZA. The measure sums up the delay experienced by travelers throughout an entire year on those roads, specifically during peak periods (weekdays from 6-10 am and 3-7 pm).

The use of the word "excessive" reflects that some level of congestion is recognized as acceptable and is thus not counted. The Federal Highway Administration (FHWA) defines excessive delay as travel slower than 20 miles per hour or 60 percent of the posted speed limit, whichever is greater. Excessive travel time is the time beyond what it would take to travel at these threshold speeds. The "per capita" implies that the total delay is shared by all residents; hence if some trips can be avoided or shifted to walking or biking or shifted out of the peak period, the measure would show improvement. The delay is added for all travelers.

Hence a bus with 25 passengers excessively delayed by 10 minutes adds up to 250 person-minutes of delay.

Data for this measure is based largely on archived real-time travel statistics reported at 15-minute intervals for the entire year. Other data on traffic volumes and vehicle types, distributions of traffic over the peak periods and estimates of vehicle occupancy are included. Annual person-hours of excessive delay on each roadway segment are summed for the entire urbanized area and divided by the UZA's population.

CMAQ Emissions Reduction

As noted, the NJTPA is required to set quantitative targets for pollutant emissions reductions from CMAQ projects within its nonattainment and maintenance areas.

Separate emission reduction targets are required for each nonattainment or maintenance area pollutant, or precursor. For the NJTPA region, these are CO and $PM_{2.5}$, along with the ozone precursors of volatile organic compounds (VOC) and nitrogen oxides (NO_X). The required emissions reduction targets identify the amount of pollutant emissions (in kilograms per day, or kg/day) estimated to be reduced by CMAQ-funded projects within the corresponding nonattainment or maintenance area(s), summed over the applicable fiscal years[1]. The two-year target represented the emissions reductions from CMAQ projects authorized within FY 2022 and FY 2023, while the four-year target represents the emissions reductions from CMAQ projects that will first be authorized within FYs 2022, 2023, 2024, and 2025.

Coordination on Performance Measure Analysis

The annual hours of PHED per capita and percent non-SOV travel measures involved considerable coordination. The NJTPA worked closely with partners in the New York–Newark, Philadelphia, and Allentown–Bethlehem–Easton UZAs, compiling and analyzing data, considering policy and practical factors, and developing suitable benchmarks and targets.

The New York–Newark UZA only has NHS roadways in New Jersey and New York. Thus, the three MPOs — the NJTPA, the New York Metropolitan Transportation Council and the Delaware Valley Regional Planning Commission (DVRPC) — and two state departments of transportation — NJDOT and New York State Department of Transportation — are responsible for setting and reporting targets for these measures. However, the coordination group also included three additional MPOs — the South Western Region Metropolitan Planning Organization, part of the Western Connecticut Council of Governments, the Orange County [NY] Transportation Council, and the South Jersey Transportation Planning Organization (SJTPO) — and two additional state departments of transportation — Connecticut DOT and Pennsylvania DOT (PennDOT). Also participating in the New York–Newark UZA coordination group meetings were staff from the New York and New Jersey FHWA divisions. The New York–Newark UZA coordination group met on July 17and July 23, 2024, to work on CMAQ traffic congestion measures, and decided not to update the four-year target for either of the measures.

[1] Note that, in this document, the term fiscal year (FY) refers to the federal fiscal year (sometimes referred to as FFY), which runs from October 1 of the prior year through September 30. For example, FY 2024 runs from October 1, 2023, through September 30, 2024.

The Philadelphia UZA has NHS roadways in four states: Pennsylvania, New Jersey, Delaware, and Maryland. The coordination group meetings included seven MPOs — NJTPA, DVRPC, SJTPO, the Wilmington Area Planning Council in Delaware, and the Lehigh Valley Transportation Study (LVTS), the Reading Area Transportation Study (RATS), and the Lancaster County Transportation Coordinating Committee in Pennsylvania — and the four state DOTs. The group met on April 25, 2024, concluding with the decision to not update the four-year target for the PHED measure, but to modify the four-year non-SOV target from 30 to 33percent.

The Allentown–Bethlehem–Easton UZA has NHS roadways in both Pennsylvania and New Jersey. The coordination group meetings included five MPOs — LVTS, RATS, DVRPC, NJTPA, and the Northeast Pennsylvania Alliance (NEPA) — and PennDOT and NJDOT. The group collaborated virtually through email and decided not to update either of the CMAQ traffic congestion measure targets.

For the CMAQ emissions reduction measure, coordination with the New Jersey Air Quality Working Group, which is comprised of subject matter experts from NJDOT, the New Jersey Department of Environmental Protection (NJDEP), NJTPA, DVRPC, and SJTPO, met on July 10 and July 30, 2024, with additional discussions via email. A decision was made not to update the four-year emissions reduction targets. All three MPOs in New Jersey contain nonattainment and/or maintenance areas and the coordination ensured a consistent approach across MPOs.

MID PERFORMANCE PERIOD CONDITION/PERFORMANCE

Percent non-SOV Travel

The most current 5-year ACS data (an aggregate 2018-2022 value) shows that, for the New York–Newark UZA, over half (54.5 percent) of the residents use a non-SOV mode as their primary commute mode. This represents an increase from the baseline number, 52.4 percent. For target setting, the partner agencies considered the recent trend of modest increases in the measure and other considerations, including consistency with policy goals, long-range forecasts, other trends in population, employment and ridesharing, public transit capacity constraints, the limited short-term impact of transportation projects and programs, and the uncertainty from numerous external factors.

For the Philadelphia UZA, the 2018-2022 5-year ACS reports that slightly more than one third (34.6 percent) of the residents use a non-SOV mode for their journey to work. Like the New York-Newark UZA, non-SOV use in the Philadelphia UZA has shown increases in recent years, and the agencies considered similar considerations as discussed in the New York-Newark UZA.

For the Allentown–Bethlehem–Easton UZA, the 2018-2022 5-year ACS reports that slightly less than one quarter (24.6 percent) of the residents use a non-SOV mode for their journey to work. The non-SOV mode share in this UZA has also increased in recent years (up from the baseline number of 20.4 percent).

Annual Hours of PHED Per Capita

For the New York-Newark UZA, the PHED measure is calculated using values from the National Performance Management Research Data Set (NPMRDS) Analytics Suite (https://npmrds.ritis.org/analytics/) (hosted by the University Maryland CATTLab) for the sections of NHS within New Jersey, and from the NPMRDS PM3 Tools (hosted by SUNY

Albany AVAIL) for the sections of NHS within New York. Using the latest calculation methods and data from each of the tools, the baseline (2021) value for the PHED measure for the New York-Newark UZA was 20.9 person-hours per capita. For the Philadelphia UZA, the baseline value for the PHED measure was 13.1 person-hours per capita, and for the Allentown–Bethlehem–Easton UZA, the baseline value was 7.1 person-hours per capita.

For the mid performance period (2023), the peak hour excessive delay was 19.8 person-hours per capita for the New York-Newark UA, 13.9 person-hours per capital for the Philadelphia UZA and 8.2 person-hours per capita for the Allentown–Bethlehem–Easton UZA.

CMAQ Emissions Reduction

The baseline, mid performance period condition (which corresponds to the two-year target) and two- and four-year targets are shown in the table below. The mid performance period condition is derived from data in the CMAQ Public Access System (PAS) for FY 2022 and FY 2023, including statewide projects distributed to NJTPA based on the regional share of statewide vehicle miles traveled (VMT).

GEOGRAPHY	POLLUTANT	NJTPA REGION (KG/DAY)*			
		ADJUSTED BASELINE** (FY18-FY21)[1]	MID PERFORMANCE PERIOD CONDITION (FY22-FY23 PAS)	2-YR TARGET (FY22-FY23)	4-YR TARGET (FY22-FY25)
CO Maintenance Area***	CO	130.498	62.193	60.422 ✓	114.796
$PM_{2.5}$ Maintenance Area	$PM_{2.5}$	12.339	0.610	4.659 ✘	8.841
Ozone Nonattainment Area	VOC	18.013	3.816	8.384 ✘	15.948
	NO_x	51.095	7.231	22.528 ✘	41.428

* Includes all projects in CMAQ PAS for NJTPA region, plus 71.7 percent of statewide projects (reflective of percentage of statewide VMT in NJTPA region)
** Without "one-time only" projects, not adjusted for vehicle cleanliness
*** Because the CO Maintenance Area is not the entire NJTPA region, CO emissions reduction benefits are further multiplied by a factor of 39.3 percent, reflective of the percentage of regional VMT within the CO Maintenance Area

Figure 4: CMAQ Emissions Reductions Baseline, Mid Performance Period Condition, and Targets

Note that the above table only reflects quantitative emissions benefits entered into the CMAQ PAS. For several of the projects (both those specific to the NJTPA region and projects with statewide benefits), no quantitative emissions benefits have been entered to date. In other words, several projects remain unanalyzed and as a result, potentially significant emissions benefits have not been quantified for FY 2022 and FY 2023. As a result, it is unclear whether the two-year targets for $PM_{2.5}$, VOC, and NO_x have not been met due to a lack of data, the fact that implemented projects are resulting in lower emissions benefits than forecasted when the targets were established, or both.

ASSESSMENT OF PROGRESS TOWARD ACHIEVING TARGETS AND FOUR-YEAR TARGET REVISIONS

In 2022, the NJTPA Board of Trustees approved the cooperatively developed UZA congestion and NJTPA region pollutant emissions reduction targets. The targets are identified and described below, along with progress toward achieving them in the mid-performance period, and any revisions made to the existing four-year targets.

According to FHWA's guidance on CMAQ Performance Plans, in the Mid Performance Period Progress Report, MPOs must provide an assessment of progress towards achieving targets. At the end of the report is a detailed list of projects from the two halves of this performance period, FY2022-FY2023 and FY2024-FY2025, that help NJPTA meet two- and four-year targets set in the 2022 Performance Plan (note that the four-year target is cumulative of emission reductions across all four fiscal years).

When quantifying target achievement, NJTPA quantified emissions reductions by project, in FHWA's CMAQ PAS, which is populated by NJDOT. The performance report includes cumulative emissions reductions for CMAQ-funded projects within NJTPA's region.

As CMAQ projects move towards implementation, they will positively affect the NJTPA four-year percent non-SOV Travel and PHED targets set in the 2022 Baseline Report. The NJTPA is also expected to meet the four-year targets for both CMAQ traffic congestion performance measures (in fact, it has already exceeded the four-year targets for the traffic congestion measures) and has adopted a revised four-year target for non-SOV travel for the Philadelphia UZA, as noted below. However, based on the available data on emissions reductions for projects in FY 2022 and 2023 as entered in the CMAQ PAS, the two-year targets for CMAQ emissions reductions for three of the four pollutants were not met (discussed in more detail below).

Percent non-SOV Travel

Based on the considerations described above, the New York-Newark UZA MPOs and state DOTs agreed that an appropriate two-year target (for the 2018-2022 5-year ACS period) was to maintain the percent non-SOV travel at 52.4 percent; and that an appropriate four-year target (for the 2020-2024 5-year ACS period) would be a slight increase to 52.5 percent. As discussed above, the two-year percent non-SOV target for this UZA was met, as evidenced by the data obtained from the 2018-2022 5-year ACS, which showed that 54.5 percent of commuters used modes other than single occupant vehicles. The coordination group agreed not to revise the four-year target of 52.5 percent, considering the uncertainty about further changes in travel behavior, following the COVID-19 pandemic.

The Philadelphia UZA MPOs and state DOTs agreed that an appropriate two-year target (for the 2018-2022 5-year ACS period) was a slight decrease in the percent non-SOV travel, to 30 percent; and that an appropriate four-year target (for the 2020-2024 5-year ACS period) was to maintain that level at 30 percent. As discussed above, the two-year percent non-SOV target for this UZA was met, as evidenced by the data obtained from the 2018-2022 5-year ACS, which showed that 34.6 percent of commuters used modes other than single occupant vehicles. Based on data analysis and discussions among the coordination group, a decision was made to increase the four-year target from 30 to 33 percent.

The Allentown–Bethlehem–Easton UZA MPOs and state DOTs agreed to set both the two-year (for the 2018-2022 5-year ACS period) and the four-year (for the 2020-2024 5-year ACS period) targets at the average value from pre-pandemic conditions, 18.6 percent. Similar to

the other UZAs, the ACS data shows that the two-year target was met with a value of 24.6 percent non-SOV travel from the 2018-2022 5-year ACS. Like the New York-Newark UZA coordination group, this group decided not to change the existing four-year target of 18.6 percent.

Annual Hours of PHED Per Capita

Given similar considerations for the percent non-SOV measure and noting both 1) that traffic has returned to near pre-pandemic conditions, and 2) that construction projects (which are anticipated to increase due to funding from the Infrastructure Investment and Jobs Act) would likely contribute to temporary increases in excessive delay, the New York-Newark UZA group agreed that an appropriate two-year target (for 2023) would be a slight increase to 22 person-hours per capita (which was the four-year target from the previous performance period). The four-year target (for 2025) reflects a subsequent slight decrease in excessive delay to 21 person-hours per capita. Because of the uncertainties in future travel behavior discussed above, along with uncertainties about data[1], the coordination group decided not to revise the existing four-year target.

For the Philadelphia UZA, the consensus two-year target represents a slight increase in delay, to 15.2 person-hours per capita, and the four-year target represents a subsequent very slight decrease to 15.1 person-hours per capita. Based on group discussions, the four-year target was not revised.

Lastly, for the Allentown UZA, the consensus was to set both the two-year and four-year targets to the pre-pandemic average value of 8.4 hours per capita. As with the other UZAs, no revision was made to the four-year target.

CMAQ Emissions Reduction

As discussed above, the NJTPA region met its two-year target for CO emissions reduction. However, the data in the CMAQ PAS indicate that the region did not meet the two-year targets that were set for $PM_{2.5}$, VOC, and NO_x emissions reductions. The failure to meet the two-year targets can be largely attributed to the lack of rigorous 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 New Jersey Air Quality Working Group agreed to implement the following Action Plan to meet the four-year CMAQ emission benefit targets:

- NJDOT will establish a schedule to host NJ Air Quality Working Group meetings, which will occur as quarterly conference calls 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, NJDEP,

[1] The PHED measure is calculated by incorporating vehicle volumes, with a lag of two years. In other words, PHED for the 2022 calendar year is calculated from travel times during 2022, but volumes during 2020. In "normal" conditions, this two-year lag would not cause much concern. However, the drastic changes in vehicle volumes caused by the COVID-19 pandemic make analysis and forecasting for the PHED measure problematic. As a result of this (along with other factors), the groups for all three UZAs decided not to try to calculate an appropriate four-year target revision.

the U.S. Environmental Protection Agency, FHWA, NJ TRANSIT, DVRPC, SJTPO, NJTPA, and the consultant team.
- All future CMAQ project analyses will use rigorous quantitative methodologies and qualitative assessment of emissions reduction benefits.
- NJDOT and its partner agencies will exclusively approve CMAQ projects with a demonstrated emissions reduction benefit, as established using the quantitative methodologies.
- For all projects and analyses, NJDOT will utilize the FHWA CMAQ toolbox and similar approved methodologies to calculate project emissions reduction benefits.
- Pursue project authorizations more rigorously to ensure projects are authorized and move forward in a timely manner.

NJDOT will rely 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 Action Plan, NJDOT's air quality planning team decided 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.

DESCRIPTION OF PROJECTS

The NJTPA and its partner agencies identify and develop CMAQ projects following federal requirements to improve the region's air quality and manage traffic congestion. The accompanying Project Description Table lists projects identified for CMAQ funding in the NJTPA region in the coming performance period. For each project (or group of projects), anticipated benefits are described as they relate to the CMAQ congestion and air pollutant reduction performance measures. The table lists "Initial TIP Program Fiscal Year," which represents the first year that the project is anticipated to receive CMAQ funding. This is important because emission reduction benefits are only entered into the PAS for the first year that the project receives CMAQ funding. The table is organized into sections relating to the two-year and four-year targets for the next performance period. Within each section, projects are sorted by project type. The initial section includes projects that are anticipated to receive initial CMAQ funding during FY 2018 and FY 2019 (the period covered by the two-year target). The second lists projects for FY 2020 and FY 2021. The final section includes projects that will continue to receive funding during the performance period but have already received CMAQ funding (prior to FY 2018). These projects will not technically help to meet the emission reduction targets (because their benefits have already been entered into the PAS), but they should contribute to meeting the congestion targets. In addition, if funding for these projects were to be eliminated, emission benefits would also be lost.

NEXT STEPS

Overall, the projects in the CMAQ Project Description Tables will assist the region with meeting the CMAQ congestion and emission reduction targets in this plan. Coupled with projects funded and implemented through other programs, they should help the region reach environmental, economic, quality of life and other social goals. The NJTPA seeks to implement CMAQ projects in environmental justice/low-income/minority communities since they are disproportionately affected by poor air quality.

The NJTPA is moving seven CMAQ-funded projects towards federal authorization within the next year. When these projects are implemented in the NJTPA region, they will have positive effects on reducing emissions and towards attaining the congestion measure goals. As these projects become authorized, they will be included in upcoming CMAQ Performance plans, since according to FHWA guidance, only the emissions benefits from new projects will count toward the established targets. The NJTPA also funds shuttle

services through NJ TRANSIT using CMAQ funds. This program, Local Mobility Initiatives, reduces emissions by reducing single occupancy vehicle trips and operating lower emissions vehicles.

The NJTPA, working with its partner agencies, will continue to identify and develop CMAQ projects based on a performance-driven planning and programming process, and will assess data and progress reports for final performance period milestones in 2026. As appropriate, adjustments may be made to performance targets. More importantly, the progress report will also inform decision makers overseeing the planning process, offering opportunities to reassess and re-align investment priorities. These priorities can be incorporated into updates of NJTPA's Transportation Improvement Program and Long Range Transportation Plan.

CMAQ PROJECT DESCRIPTION TABLE
Interim Performance Period: FY 2018-2021

DBNUM*	PROJECT SPONSOR & TITLE	PROJECT DESCRIPTION	PROJECT TYPE	INITIAL TIP PROGRAM FISCAL YEAR	RELEVENT POLLUTANT	EMISSIONS BENEFIT	TRAFFIC CONGESTION BENEFIT (PHED)	TRAFFIC CONGESTION BENEFIT NON-SOV
FY 2018 AND FY 2019 PROJECTS BY PROJECT TYPE								
X065	*NJDEP*	Non-Road Construction Diesel Retrofit	Advanced Diesel Truck / Engine Technologies	2018	NOx, PM 2.5	Reduces diesel emissions from non-road construction equipment using catalytic converters and diesel particuate filters.	N/A	N/A
X065	*Bergen County Adaptive/Intelligent Signal Program in Hackensack*	Optimizes traffic signals in the TOD area of Hackensack, relieving congestion for buses and cars.	Congestion Relief, Signal/ITS	2018	NO_x, VOC, PM_{25}	Reduces congestion and improves air quality by optimizing the signal network in the TOD area.	Reduces congestion by improving traffic operations.	Reduces SOV travel by improving traffic flow for buses and in the TOD area.
T120	*NJ TRANSIT Small/Special Services Program*	Promotes transit solutions to reduce congestion, manage transportation demand and improve air quality such as shuttles and bike/transit facilitation.	TDM	2018	NO_x, VOC, PM_{25}	Reduces emissions by provision of alternative transit services.	Reduces congestion by encouraging transit use.	Reduces SOV travel by providing innovative access to transit services.
T87	*NJ TRANSIT Hudson-Bergen and Newark Light Rail System*	Annual improvements, rolling stock and Rt. 440 Extension	Transit	2018	NO_x, VOC, PM_{25}	Reduces emissions by encouraging increased transit use and reducing SOV travel.	Reduces congestion by encouraging transit use.	Reduces SOV travel by providing transit access to key waterfront destinations in Hudson County and linking existing transit hubs.
X065	*NJDEP It Pay$ to Plug In*	Expands NJDEP's EV charging program with 510 charging stations in public workplaces, downtown areas, leisure destinations, public colleges and universities, and major transportation corridors.	Alternative Fuels and Vehicles	2019	NO_x, VOC, PM_{25}	Emissions are reduced by implementing infrastructure for EVs to increase the market share of EVs in the NJTPA region.	N/A	N/A
X065	*Passaic County Smart Corridor Traffic Signal Optimization*	Optimizes 62 traffic signals and other smart elements along three key corridors in Passaic County.	Congestion Relief, Signal/ITS	2019	NO_x, VOC, PM_{25}	Reduces congestion and improves air quality by optimizing progression on signalized routes.	Reduces congestion by improving traffic operations.	N/A
X065	*PANYNJ Port Diesel Retrofits*	Retrofit Cargo Handling Equipment with Anti-Idling Technology	Diesel Retrofit	2019	NO_x, PM_{25}	Reduces emissions by retrofitting 100 yard tractors with start stop technology.	N/A	N/A
9237	*NJDOT Route 57/182/46 Hackettstown Mobility Improvements*	Initiated by the CMP, reconfigure four intersections, traffic signals rephased and ADA facilities upgraded.	Signal/ITS, Bike/Ped	2019	NO_x, VOC, PM_{25}	Reduces congestion and improves air quality by optimizing progression on signalized routes.	Reduces congestion by improving traffic operations.	N/A
2018 CONTINUING PROJECTS								
X185	*No MPO Identified/State Sponsored*	This program addresses bicycle, pedestrian, transit and ADA travel needs through improvements on state, county and local systems.	Bicycle/Pedestrian	2018				

CMAQ PROJECT DESCRIPTION TABLE

MID PERFORMANCE REPORT - 2022-2025 PERMANCE PERIOD

DBNUM	PROJECT SPONSOR & TITLE	PROJECT DESCRIPTION	PROJECT TYPE	INITIAL TIP PROGRAM FISCAL YEAR	RELEVENT POLLUTNAT	EMISSIONS BENEFIT	TRAFFIC CONGESTION BENEFIT (PHED)	TRAFFIC CONGESTION BENEFIT NON-SOV
COMPLETED PROJECTS 2023-2024								
X065	Ocean County - Signal Optimization	Signal Optimization throughout Ocean County	Congestion Relief, Signals/ITS	2018	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X185	Bike/Ped Facilities/accommodations	State Bicycle/Pedestrian Coordinator, Capital Cost	Bicycle and Pedestrian Facilities and Programs	2022	CO, NOx, VOCs, PM 2.5	Reduce emissions due to reduction in auto trips	Improved traffic operations reduces congestion	Mode shift from auto to bike/ped
T150	Section 5310 Program	Transit Improvements	Section 5310 Program	2022	CO, NOx, VOCs, PM 2.5	Reduction in auto trips	Improved traffic operations reduces congestion	Reduction in auto trips
02372B	Route 202 First Avenue Intersection Improvements	Congestion Reduction	Congestion Reduction and Traffic Flow Improvements	2022	CO, NOx, VOCs, PM 2.5	Congestion reduction	Improved traffic operations reduces congestion	NA
T112	Rail Rolling Stock	Transit Mngmnt. Systems	Transit Improvements	2022	NOx, VOCs, PM 2.5, CO	Heavy rail replacement	Improved traffic operations reduces congestion	Mode shift from auto to rail
CONTINUING PROJECTS 2023-2024								
15343	Intelligent Traffic Signal Systems	Congestion Reduction	Congestion Reduction and Traffic Flow Improvements	2022	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
9237	Rt. 57/182/46 Hackettstown Mobility Improvements	Congestion Reduction, Left-Turn / Managed anes, Design	Congestion Reduction and Traffic Flow Improvements	2022	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Y	NA
X185	Bicycle & Pedestrian Facilities/Accommodations	Facilities, Other--Description,	Bicycle and Pedestrian Facilities and Programs	2023	CO, NOx, VOCs, PM 2.5	Reduce emissions due to reduction in auto trips	Improved traffic operations reduces congestion	Mode shift from auto to bike/ped
15343	Intelligent Traffic Signal Systems	Congestion Reduction,	Congestion Reduction and Traffic Flow Improvements	2023	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
T112	Rail Rolling Stock	Transit Mngmnt. Systems,	Transit Improvements	2023	NOx, VOCs, PM 2.5, CO	Heavy rail replacement	Improved traffic operations reduces congestion	Mode shift from auto to rail
X185	Bicycle & Pedestrian Facilities/Accommodations	Facilities, Other--Description,	Bicycle and Pedestrian Facilities and Programs	2023	CO, NOx, VOCs, PM 2.5	Reduce emissions due to reduction in auto trips	Improved traffic operations reduces congestion	Mode shift from auto to bike/ped

CMAQ PROJECT DESCRIPTION TABLE

MID PERFORMANCE REPORT - 2022-2025 PERMANCE PERIOD

DBNUM	PROJECT SPONSOR & TITLE	PROJECT DESCRIPTION	PROJECT TYPE	INITIAL TIP PROGRAM FISCAL YEAR	RELEVENT POLLUTNAT	EMISSIONS BENEFIT	TRAFFIC CONGESTION BENEFIT (PHED)	TRAFFIC CONGESTION BENEFIT NON-SOV
X065	NJ TRANSIT - Local Mobility Initiatives (LMI)	NJTPA will conduct a solicitation for LMI projects for FY 2021	Transit Shuttles	2018 or 2021	NOx, VOCs, PM2.5	Emissions are reduced by encouraging increased transit use and reducing SOV travel.	Projects will reduce congestion by encouraging transit use.	Projects will reduce SOV travel by providing access to transit and work places
X065	City of Hoboken - Southwest Hoboken Signal Optimization	Signal optimization project within southwest Hoboken	Congestion Relief, Signals/ITS	2018	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X065	Hudson County - Traffic Signal Optimization	JFK Blvd. – Armstrong Ave to Clinton Ave - Traffic Signal Optimization	Congestion Relief, Signals/ITS	2018	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X065	International Motor Freight - IMF Zero Emission Goods Movement Project	Installation of fast charging equipment supporting electric trucks at the port	Alternate fuels & vehicles	2021	CO, NOx, PM 2.5	Emissions- free trucking annually in the NJTPA region.	NA	NA
X065	Monmouth County - Electric Monmouth	Install level 2 chargers on County properties such as parks, offices and libraries for public use	Alternate Fuels & Vehicles	2021	NOx, VOCs, PM 2.5	Expanding infrastructure to increase the market share for EVs allows for cleaner energy use.	NA	NA
X065	Essex County	Optimized / Adaptive -Traffic Signals - Central Avenue (C.R. 508)	Congestion Relief, Signals/ITS	2021	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X065	County of Passaic - Smart Corridor – Traffic Signal Coordination Project	Signal Optimization along one corridor	Congestion Relief, Signals/ITS	2018	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
			UPCOMING PROJECTS BY PROJECT TYPE					
X065	Weehawken & City of Union City	Union City and Weehawken Traffic Signal Optimization	Congestion Relief, Signals/ITS	2021	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X065	City of Paterson	Paterson Traffic Circulation & Signal Optimization Project	Congestion Relief, Signals/ITS	2021	CO, NOx, VOCs, PM 2.5	Optimized traffic flow reduces pollutant emissions	Improved traffic operations reduces congestion	NA
X065	EZ Ride	EZ Electric	Alternate fuels & vehicles	2021	CO, NOx		NA	NA

CMAQ PROJECT DESCRIPTION TABLE

MID PERFORMANCE REPORT - 2022-2025 PERMANCE PERIOD

DBNUM	PROJECT SPONSOR & TITLE	PROJECT DESCRIPTION	PROJECT TYPE	INITIAL TIP PROGRAM FISCAL YEAR	RELEVENT POLLUTNAT	EMISSIONS BENEFIT	TRAFFIC CONGESTION BENEFIT (PHED)	TRAFFIC CONGESTION BENEFIT NON-SOV
X065	Morris County - Patriot's Path Extension East	Extend a three mile section of Patriot's Path east, coverting it into a 10 foot wide Shared Use Path	Bicycle/Pedestrian	2021	CO, PM 2.5, NOx, VOCs	Provides non-motorized modes of transportation thereby reducing emissions.	Reduces congestion by reducing VMT on local streets.	Reduce SOV travel by shifting modes from auto use
X065	NJDEP - It Pay$ to Plug In (Phase I and II)	Expands NJDEP's electric vehicle (EV) charging program with approximately 400 charging stations in public workplaces, downtown areas, leisure destinations, public colleges & universities & major transportation corridors.	Alternate fuels & vehicles	2018 or 2021	NOx, VOCs, PM 2.5	Expanding infrastructure to increase the market share for EVs allows for cleaner energy use.	NA	NA
X065	NJDEP Emergency Vehicle Idle Reduction	Install Auxillary Power Units (APUs) in emergency vehicles to reduce engine idling.	Anti-idling	2021	CO, NOx,	Reduced vehicle engine-idling reduces pollutant emissions.	NA	NA
X065	Passaic County - Highlands Rail Trail - Phase II	Phase II of Highlands Rail Trail encompassing 1.25 miles.	Bicycle/Pedestrian	2021	CO, PM 2.5, NOx, VOCs	Provides non-motorized modes of transportation thereby reducing emissions.	Reduces congestion by reducing VMT on local streets.	Reduce SOV travel by shifting modes from auto use.

FEDERAL LEGISLATIVE REQUIREMENTS

The legislative requirements are in 23 USC § 149(l)

(l) Performance Plan. —

(1) In general.—Each metropolitan planning organization serving a transportation management area (as defined in section 134) with a population over 1,000,000 people representing a nonattainment or maintenance area shall develop a performance plan that—

(A) includes an area baseline level for traffic congestion and on-road mobile source emissions for which the area is in nonattainment or maintenance;

(B) describes progress made in achieving the air quality and traffic congestion performance targets described in section 150(d); and

(C) includes a description of projects identified for funding under this section and how such projects will contribute to achieving emission and traffic congestion reduction targets.

(2) Updated plans.— Performance plans shall be updated biennially and include a separate report that assesses the progress of the program of projects under the previous plan in achieving the air quality and traffic congestion targets of the previous plan.

Regulatory requirements are in 23 CFR § 490.107(c)(3)(ii) (baseline) and (iv) (full period)

(ii) For the CMAQ Traffic Congestion and Total Emissions Reduction measures in subparts G and H of this part, the CMAQ performance plan submitted with the State DOT's Baseline Performance Period Report to FHWA shall include:

(A) The 2-year and 4-year targets for the CMAQ Traffic Congestion measures, identical to the relevant State DOT(s) reported target under paragraph (b)(1)(ii)(A) of this section, for each applicable urbanized area;

(B) The 2-year and 4-year targets for the Total Emissions Reduction measure for the performance period;

(C) Baseline condition/performance for each MPO reported CMAQ Traffic Congestion targets, identical to the relevant State DOT(s) reported baseline condition/performance under paragraph (b)(1)(ii)(B) of this section;

(D) Baseline condition/performance derived from the latest estimated cumulative emissions reductions from CMAQ projects for each MPO reported Total Emissions Reduction target; and

(E) A description of projects identified for CMAQ funding and how such projects will contribute to achieving the performance targets for these measures.

(iv) For the CMAQ Traffic Congestion and Total Emissions Reduction measures in subparts G and H of this part, the CMAQ performance plan submitted with the State DOT's Full Performance Period Progress Report to FHWA shall include:

(A) 4-year condition/performance for the CMAQ Traffic Congestion measures, identical to the relevant State DOT(s) reported condition/performance reported under paragraph (b)(3)(ii)(A) of this section, for each applicable urbanized area;
(B) 4-year condition/performance derived from the latest estimated cumulative emissions reductions from CMAQ projects for each MPO reported Total Emissions Reduction target; and
(C) An assessment of the progress of the projects identified in both paragraphs (c)(3)(ii)(C) and (c)(3)(iii)(D) of this section toward achieving the 4-year targets for these measures.

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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