

Congestion Mitigation and Air Quality Mid Performance Period Progress Report 2018 – 2019

South Jersey Transportation Planning Organization

Part of Philadelphia, PA—NJ—DE—MD Urbanized Area (UZA) and Atlantic City, NJ UZA

Background/Introduction:

Per the System Performance Rules, as laid out in 23 CFR 490.105(f)(6)(iii), if an MPO is a Transportation Management Agency (TMA)¹ and if any part of a designated nonattainment and maintenance area within the metropolitan planning area overlaps the boundary of an urbanized area with a population more than 1 million in population, that MPO shall establish both 2-year and 4-year targets for their metropolitan planning area, and prepare a Congestion Mitigation Air Quality (CMAQ) Performance Plan (as specified in 23 CFR 490.107(c)(3)). Since a portion of the 8-Hour Ozone nonattainment area within the SJTPO metropolitan planning boundary overlaps with the Philadelphia, PA-NJ-DE-MD Urbanized Area (UZA), which has a population of approximately 5.4 million, it is subject to this requirement. While the SJTPO region also includes the Atlantic City, NJ Urbanized Area, with a population of approximately 248,000 (less than 1 million), it is not subject to reporting CMAQ congestion targets until the next 4-year performance period, starting in 2022.

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 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 area (UZA). The percent of Non-SOV travel measure is the percentage of travel, in the UZA, conducted by means other than SOV. The CMAQ Emissions measure is the cumulative estimated emissions reductions for all CMAQ-funded projects obligated during the first two-year and four-year performance period for each applicable criteria pollutant.

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. MPOs submit the plan and its biennial updates to their respective State DOT for inclusion as an attachment to the State DOT Baseline, Mid, and Full Performance Period Reports, respectively.

The performance report must also include the cumulative emissions reductions for CMAQ-funded projects in the MPO's service area for federal fiscal years 2018 and 2019 as they are reported in the FHWA CMAQ Public Access System (PAS). Even though there were no SJTPO programmed CMAQ projects reported in the CMAQ Public Access System in FY 2018 and FY 2019, the SJTPO region was still able to meet or exceed the goals laid out in the Performance Plan. This was achieved through shared benefits of Statewide projects implemented by NJDOT and NJ TRANSIT. The goals and achievement towards those goals can be seen in Table 1 and Table 2.

Moving forward SJTPO is working to implement more CMAQ funded projects in the region. In April of 2020 SJTPO released Notice of Funding Availability for the CMAQ program. The application period for SJTPO’s competitive CMAQ Program was open from April 13th to August 5th, 2020. The goal is to provide funding opportunities for new transportation projects in Atlantic, Cape May, Cumberland, and Salem Counties. There will be approximately \$5.7 million available for CMAQ-eligible projects over three fiscal years (FY 2022, FY 2023, and FY 2024) that will further improve air quality and reduce traffic congestion in the region.

2-Year Condition/Performance:

2-year Condition/Performance for Traffic Congestion Measures:

The Philadelphia PA-NJ-DE-MD UZA exceeded expectations in meeting the Percent Non-SOV travel measure 2-year and 4-year targets set in 2018. The 2-year and 4-year targets were set at 28.0 percent and 28.1 percent, respectively. The Percent Non-SOV Travel measure was calculated for the interim performance period using the most recent U.S. Census ACS five-year estimates (2014-2018) with a result of 28.2 percent, exceeding the 2-year and 4-year targets.

Additionally, the UZA exceeded expectations in meeting the optional 2-year Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita target set in 2018 as well as the 4-year target of 17.2 annual hours per capita. The 2-year target was 17.0 and current measured value is 14.6, or a 2.4 decrease.

2-year Condition/Performance for On-Road Mobile Source Emissions Measures:

The SJTPO region exceeded the goals set for On-Road Mobile Source Emissions. The goals set in 2018 can be seen in Table 1. There were no SJTPO programmed CMAQ projects that were reported in the CMAQ Public Access System between fiscal years 2018 and 2019. However, benefits resulting from statewide projects sponsored by NJDOT and NJ TRANSIT are distributed to the MPOs, including SJTPO. The emission benefits from those statewide projects can be seen in Table 2. The 2-year and 4-year VOC goal has been exceeded by 6.17 kg/day and 2.24 kg/day, respectively. The 2-year and the 4-year NOx goals have been exceeded by 74.28 kg/day and 65.26 kg/day respectively.

Table 1: SJTPO Goals (includes 7.6% of Benefits From Statewide Projects)

FY Year	Total Emissions Benefits Projections (kg/day)			
	VOC	CO*	NOX	PM2.5*
2018	2.21		5.23	
2019				
2020	2.01		4.64	
2021	1.93		4.38	
Sum '18-'19	2.21	0.00	5.23	0.00
Sum '18-'21	6.14	0.00	14.25	0.00

* No CO or PM2.5 as SJTPO meets the NAAQS for these pollutants

**SJTPO anticipates completing backlog in FY2019 w/ no new projects

**Table 2:
SJTPO Progress to Date (includes 7.6% of Benefits From Statewide Projects)**

FY Year	Total Emissions Benefits Projections (kg/day)			
	VOC	CO*	NOX	PM2.5*
2018	8.14		79.03	
2019	0.24		0.48	
2020				
2021				
Sum '18-'19	8.38	0.00	79.51	0.00
Sum '18-'21				

*** No CO or PM2.5 as SJTPO meets the NAAQS for these pollutants**

Adjusted 4-year Targets:

In coordination with the Philadelphia PA-NJ-DE-MD Urbanized Area Transportation PM3 Measures Coordination Committee, NJDOT, and the Complete Team (a group of transportation planning and operations professionals convened by NJDOT that meets quarterly) it was decided not to adjust the 4-year targets for Traffic Congestion Measures or On-Road Mobile Source Emissions. This was partially due to the fact that the goals had been met and the uncertainties associated with how COVID-19 will impact the region over in terms of commuter behaviors over the remaining reporting period.

Description of Projects:

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 Fiscal Years 2018-2019, and 2018-2021). 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 project descriptions below were last updated with the release of SJTPO’s RTP 2050 in June 2020. Since this update two additional CMAQ projects have been programmed for the SJTPO region for FY 2020 authorization. This includes the Cumberland County Intersection Improvements (Bridgeton Traffic Signals) project and the Pacific Avenue (CR 621), Fish Dock Road to Rambler Road project. More details on these projects along with all the other programmed CMAQ projects can be found in the tables below. As stated, the 2-year and 4-year targets have already been achieved. However, the local and statewide projects outlined below will continue to contribute to the 4-year targets during the remaining 2 years of the CMAQ Performance Plan.

State Project ID	TIP Program Year (FY)	Project Type	Project Title	Additional Project Description	Emissions Benefit (Q/A)	Traffic Congestion Benefit? (PHED)	Traffic Congestion Benefit? (Non-SOV)	New (N) or Continuing (C) Project?	STATUS FY 2020
3.1. Local CMAQ Projects not yet reported in CMAQ Public Access database									
X065	2018	Traffic Operations	Roosevelt Blvd./34th Street Advanced Traffic Signal Project	Construction and interconnection of advanced system equipment at seven signalized intersections along Cape May County CR 623.	Yes— improved operations, less idling	Yes	No	N	Resubmitted for FY 2022-2024 Solicitation Period
X065	2018	Transit	Purchase of Eight (8) Replacement Paratransit Passenger Buses (flex to NJ Transit)	Replacement of older vehicles with cleaner diesel powered buses and low emission unleaded fueled mini-buses	Yes, cleaner vehicles and fuels	Possibly, removing SOV's off road.	Yes	N	Moved to FY 2021
X065	2018	Transit	Procurement of 7 low emission, unleaded fuel, body on chassis mini-buses (flex to NJ Transit)	This project consists of the procurement of 7 low emission, unleaded fueled, body on chassis mini-buses with a fourteen passenger seating capacity and two wheel chair securement locations. These newly purchased vehicles would replace older models of a similar nature which have reached or will reach the end of their useful life	Yes, cleaner vehicles	Possibly, removing SOV's off road.	Yes	N	Moved to FY 2021
X065	2018	Alternative Fuel	It Pay\$ to Plug In: New Jersey's Electric Vehicle Charging Grants Program	The project would expand the New Jersey Department of Environmental Protection's (NJDEP) successful electric vehicle (EV) charging grants program, It Pay\$ to Plug In, to fund strategic deployment of EV charging stations throughout the SJTPO region.	Yes, cleaner vehicles	No	No	N	Moved to FY 2021
X065	2018	Traffic Operations	Landis & Mill, Landis & Orchard Traffic Signal Upgrades	The proposed project is to design and construct traffic signal improvements at the intersections of Landis Avenue & Mill Road, and Landis Avenue & Orchard Road. These two intersections provide an important connection between the interchange of Landis Ave and Route 55, Delsea Drive (Route 47), and downtown Vineland. This project is a continuation of two prior CMAQ projects on Landis Avenue: In FY 2015, Landis Avenue Signal Upgrades Phase I was funded to upgrade seven signals from The Boulevards to Myrtle Street. In FY 2016, Landis Avenue Signal Upgrades Phase II was funded to upgrade four signals from West Ave to 4th St.	Yes— improved operations, less idling	Yes	No	N	Moved to FY 2021
X065	2020	Traffic Operations	Cumberland County Intersection Improvements (Bridgeton Traffic Signals)	The project will consist of the replacement and upgrading of two existing traffic signals to current standards. The specific emissions reductions will be primarily due to the following: - Upgraded signals will be actuated using video detection technology which will significantly reduce delay and its associated emissions. - Upgraded signals will have existing timings reviewed during design phase and appropriate changes made (if possible) to further reduce delay and associated emissions. - Upgraded signals will include pedestrian actuation and dedicated pedestrian signals which will promote additional pedestrian activity within the adjacent urban environment.	Yes— improved operations, less idling	Yes	No	N	FY 2020 authorization
S1711	2020	Bike/Pedestrian Improvement	Pacific Avenue (CR 621), Fish Dock Road to Rambler Road	This project will add dedicated bike lanes that will facilitate a means of travel to various employment centers and upgrades five signal	Yes – less idling and fewer vehicle trips	Yes	Yes	N	FY 2020 authorization

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3.2 Statewide CMAQ Projects									
13303	FY 2018-21	ITS	Active Traffic Management System	This program will provide funding for the deployment program for the first Active Traffic Management System (ATMS) in the State including all phases of design. This program will include funding for the complete delivery of the Final Design document for Active Traffic Management System (ATMS) for a candidate highway (I-80, I-295 or I-78). The design document will be used to deploy and carry out the actual construction of this technology for automatic operation and handling of traffic.	Yes— improved operations, less idling	Yes— improved operations.	No	N	Ongoing.
X185	FY 2018-21	Bike/Pedestrian Improvements	Bicycle & Pedestrian Facilities/Accommodations	This is a comprehensive program to insure the broad implementation of the Statewide Bicycle and Pedestrian Master Plan, Complete Streets Policy and the implementation of federal and state policies and procedures pertaining to bicycle, pedestrian, transit and ADA access and safety. This program includes addressing bicycle, pedestrian, transit and ADA travel needs through the development of improvements on state, county and local system either by independent capital projects or through grants to counties and municipalities. Projects must make full consideration for the needs of all users.	Yes.	Yes, reduces vehicles on road	Yes.	N	Mostly on schedule; Statewide Bicycle and Pedestrian Master Plan behind schedule.
15343	FY 2018-21	ITS	Intelligent Traffic Signal Systems	This program will seek to improve mobility on New Jersey's arterial highways. Arterials contribute almost 70% of total congestion that occurs in New Jersey. This program will focus on dynamically managing NJ's arterials from NJDOT's Arterial Management Center. Existing traffic signals will be strategically, systematically and programmatically upgraded from standalone signals to highly sophisticated, coordinated, real time traffic response traffic signals. This upgrade will consist of installing new controllers, intelligent software and algorithms, robust detection and communication. This is a plan to upgrade most of the signals on NJDOT owned highways only.	Yes— improved operations, less idling	Yes— improved operations	No	N	Ongoing.
X43	FY 2018-21	Transit	Transportation Demand Management Program Support	This funding is utilized to continue the management of the Owned and Leased Park and Ride Program and the remaining efforts as they relate to the 1-800-CARPOOL program which also includes maintaining the RidePro ride matching software program.	Yes – Improved operations	Yes – reduces SOVs	Yes	C	Still in operation. In FY 20 STIP as DB X28B
T112	FY 2018-21	Transit	Rail Rolling Stock Procurement	This program provides funds for the replacement of rail rolling stock, including engineering assistance and project management, to replace over-aged equipment including rail cars, revenue service locomotives, and expansion of NJ TRANSIT rolling stock fleet (cars and locomotives) to accommodate projected ridership growth and other system enhancements over the next ten years. Funding is provided to support vehicles/equipment (for rail operations). Annual funds are provided for Comet V single-level car lease payments, Electric Locomotive lease payments, Diesel Locomotive lease payments, Dual Power Locomotives and Multi-Level rail car lease payments and other upcoming rolling stock lease payments. Pay-as-you-go funding is also programmed for Multi-Level vehicles and other rolling stock. CMAQ: Funding for Rail Rolling Stock Procurement will include CMAQ funds. Rail Rolling Stock Procurement is CMAQ eligible because it meets federal eligibility requirements. The project will provide funding for the purchase of Multi-Level Coaches and Multi-Level EMU vehicles. For the CMAQ justification see "CMAQ Report for NJ TRANSIT". This project is funded under the provisions of Section 13 of P.L. 1995, c.108.	Supporting rail transit operations reduces emissions by reducing SOV travel.	Maintaining transit vehicles and supporting transit operations reduce congestion.	Maintaining transit vehicles and supporting transit operations reduce SOV travel.	C	Funded for FY 2020; expected to be used FY 2020.

Assessment of Progress Towards Achieving the 2-year Targets:

As described above, SJTPO has achieved its 2-year and 4-year targets. The seven local led SJTPO CMAQ programmed projects outlined in Table 3.1 and the five state led projects outlined in Table 3.2 have been updated from since the 2018 CMAQ Performance Plan was adopted. The changes include two new local projects scheduled for FY 2020 authorization that will contribute to a reduction in PHED and fewer SOVs. Other changes are primarily related to delays in project development.

Despite the addition of new projects and delays in previously programmed projects, SJTPO has exceeded the 2-year targets. The seven local programmed projects will further enhance air quality in the region as well as reduce traffic congestion as indicated in Table 3.1.