Metropolitan Transportation Commission

Congestion Mitigation & Air Quality Improvement Program Performance Plan

Full Performance Period Progress Report
2018-2021

October 17, 2022

INTRODUCTION

Performance-Based Planning and Programming

The Moving Ahead for Progress in the 21st Century Act (2012), also known as MAP-21, established several performance management requirements for state departments of transportation (DOTs), metropolitan planning organizations (MPOs), and transit agencies. A performance-based approach to transportation planning and programming intends to ensure the most efficient investment of transportation funds, support improved investment decision-making, and increase accountability and transparency. MAP-21 and subsequent federal legislation require DOTs, MPOs, and transit agencies to establish performance targets for each of the following national goal areas:

- Safety
- Infrastructure Condition
- System Reliability
- Freight Movement and Economic Vitality
- Congestion Reduction
- Environmental Sustainability

MTC's Role

Under the federal performance management rules, MTC is responsible for setting short-range targets and incorporating the targets into its planning processes – most notably, the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP). In the RTP, MTC is required to report on the condition and performance of the transportation system in relation to its adopted performance targets (23 CFR § 450.324). For the TIP, MTC must show that it is moving in the right direction based on the package of near-term investments included in the TIP, and must also describe how much of an effect the TIP investments are expected to have on the targets (23 CFR § 450.326).

- **Reporting**
  In addition to quantifying progress made towards performance targets in the context of its TIP and RTP, MTC is required to report regional targets to Caltrans. To meet this requirement, MTC has expanded its Vital Signs performance monitoring website (http://www.vitalsigns.mtc.ca.gov/targets) to incorporate federal performance targets, as well as additional performance indicators.

- **CMAQ Performance Plan**
  MTC is also required to report specifically on regional condition, targets, and performance for the federal performance measures identified to carry out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.
    - To assess traffic congestion, the Federal Highway Administration (FHWA) developed two performance measures:

        - Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita
        - Percent of Non-Single Occupancy Vehicle (SOV) Travel
    - To assess on-road mobile source emissions, FHWA developed one measure:
        - Total Emissions Reduction, for all CMAQ-funded projects, of each applicable criteria pollutant and precursor

➔ ***Baseline Performance Period Report:*** Reflects targets and baseline conditions, and includes a description of CMAQ-funded projects programmed during the current performance period (2018-2021).

➔ ***Mid and Full Performance Period Reports:*** Additional reports are required on a biennial basis. In addition to the requirements of the baseline report, mid and full performance period reports must also include an assessment of progress in reaching 2- and 4- year targets.

CMAQ Performance Plan Report Structure

This report is organized into three sections outlining targets for the traffic congestion and emissions reductions performance measures; baseline conditions and 4-year progress reporting; and an assessment of the contribution of CMAQ-funded projects towards achieving the 4-year targets.

PERFORMANCE TARGETS

State DOTs and MPOs are required to set two- and four-year targets every four years for each CMAQ performance measure.

Goal Areas	• Congestion Reduction • Environmental Sustainability
Performance Measures	• Congestion Reduction o Annual hours of peak-hour excessive delay per capita, by urbanized area o Percent of non-single occupancy vehicle (non-SOV) travel, by urbanized area • Environmental Sustainability o Total emissions reductions from CMAQ-funded projects, by pollutant
Performance Period	• Congestion Reduction Measures: January 1, 2018 – December 31, 2021 • Emissions Reduction Measure: October 1, 2017 – September 30, 2021
Target Years	2019, 2021

Congestion Reduction

For the congestion reduction measures, targets are federally-required to be fully consistent between the state Department of Transportation (DOT) and the Metropolitan Planning Organization (MPO) for each urbanized area. For the first performance period, targets must be set for urbanized areas (UAs) with populations over one million that are also in nonattainment or maintenance areas for ozone, carbon monoxide or particulate matter. In the Bay Area, San Francisco-Oakland and San Jose urbanized areas meet these thresholds. In the second performance period, beginning in 2022, MTC will be required to set targets for an additional three urbanized areas.

For the first round of target-setting, Caltrans and MTC are responsible for setting four-year targets (2021) for the excessive delay measure and two- and four-year targets (2019 and 2021) for the mode share measure. Caltrans and MTC agreed upon urbanized area targets for both congestion measures in May 2018. The four-year targets adopted in 2018 were not adjusted at the 2020 mid-way point of the performance period.

The targets adopted for the delay measure in the Bay Area's urbanized areas were aspirational at the time, as the targets aimed to reduce peak-hour excessive delay per capita by 4% over 2017 conditions, despite rapid growth in congestion in the preceding years. The non-SOV share targets set by Caltrans for the Bay Area urbanized areas aligned with the mode shift targets of MTC's *Plan Bay Area 2040*.

Table 1: Congestion Reduction Performance Targets

Performance Measures	2017 Baseline	2-year Targets Caltrans & MTC	4-year Targets Caltrans & MTC
Peak-hour excessive delay – annual, per capita			
San Francisco-Oakland UA	31.1 hours	*Not required to set two-year targets this cycle*	**30.0 hours** (-4.0%)
San Jose UA	27.5 hours		**26.4 hours** (-4.0%)
Concord UA	N/A	*Not required to set two- or four-year targets this cycle*	
Santa Rosa UA			
Antioch UA			
Non-SOV travel – percent			
San Francisco-Oakland UA	44.3%	**45.3%** (+1.0%)	**46.3%** (+2.0%)
San Jose UA	24.5%	**25.5%** (+1.0%)	**26.5%** (+2.0%)
Concord UA	N/A	*Not required to set two- or four-year targets this cycle*	
Santa Rosa UA			
Antioch UA			

Emissions Reductions

State DOTs and MPOs are required to set two- and four-year numerical targets for the emissions reduction measure for each applicable pollutant. The emissions reductions performance measure focuses specifically on projects funded through the CMAQ program. MPOs have the option of supporting State targets or setting their own region-specific numerical targets on a target-by-target basis.

Statewide and regional baseline data is from federal fiscal years 2014 through 2017. Caltrans set statewide targets for emissions reductions in May 2018. MTC adopted regional targets in November 2018, based on the total expected emissions reductions per day for federal fiscal years 2018 and 2019 (two-year targets) and 2020 and 2021 (four-year targets). The adopted regional targets reflect a steady increase in the daily kilograms reduced for each pollutant for projects funded through the CMAQ program. The adopted four-year targets were not adjusted at the 2020 mid-way point of the performance period.

Table 2: Emissions Reduction Performance Targets

Performance Measure (Kg/day)	Caltrans Statewide Targets			MTC Regional Targets		
	Statewide Baseline (2014-2017)	*2-year Targets (2018-2019)*	*4-year Targets (2018-2021)*	*Regional Baseline* (2014-2017)	*2-year Targets (2018-2019)*	*4-year Targets (2018-2021)*
Total emissions reductions from CMAQ-funded projects, by pollutant						
Fine particulate matter – PM2.5	904.25	**913.29**	**922.34**	24.50	**8.66**	**16.53**
Particulate matter – PM10	2,431.21	**2,455.52**	**2,479.83**	31.29	**10.99**	**21.00**
Carbon monoxide – CO	6,863.26	**6,931.90**	**7,000.54**	31,046.04	**8,373.38**	**14,963.60**
Volatile organic compounds – VOCs	951.83	**961.35**	**970.87**	2,248.93	**528.31**	**897.70**
Nitrogen oxide – NOx	1,753.36	**1,770.89**	**1,788.43**	2,179.66	**557.61**	**962.58**

** Statewide values currently reflect one-year reductions, rather than two- and four-year reductions.*

Note: A regional target for carbon monoxide may not be required, as the San Francisco Bay Area's maintenance period for carbon monoxide ended June 30, 2018. MTC elected to adopt targets and track performance for carbon monoxide for this first reporting cycle.

BASELINE CONDITIONS & PROGRESS

Data on existing conditions for each performance measure is provided by Caltrans, unless otherwise noted.

Congestion Reduction

Baseline conditions for excessive delay and non-SOV mode share measures are reported for calendar year 2017. Progress made for this measure over the first four years of the period are reported for calendar years 2018 through 2021.

As shown in the table below, the average annual excessive delay per capita decreased significantly in the San Francisco-Oakland and San Jose urbanized areas starting in 2020. By the end of the performance period, delay reductions in both areas far surpassed the adopted four-year targets to reduce delay per capita by 4% over 2017 conditions. The magnitude of the decrease in per capita peak-hour excessive delay is the result of changes in travel behavior related to the COVID-19 pandemic.

Table 3: Peak-Hour Excessive Delay Per Capita - Baseline & Full Performance Period Conditions

Urbanized Areas	2017 Baseline	2018	2019	2020	2021	4-year Targets	4-year Progress
San Francisco-Oakland UA	31.1 hours	31.6 hours	30.6 hours	12.5 hours	18.3 hours	**30.0 hours** (-4.0%)	**18.3 hours** (-41.2%)
San Jose UA	27.5 hours	29.1 hours	27.4 hours	11.6 hours	13.7 hours	**26.4 hours** (-4.0%)	**13.7 hours** (-50.2%)
Concord UA	*Not required this cycle*						
Santa Rosa UA							
Antioch UA							

Significant progress has also been made in the non-SOV mode share measure, with non-SOV mode share increasing 11.1% in the San-Francisco-Oakland urbanized area and 24.1% in the San Jose urbanized area over the four years of performance period. The size of the increase in non-SOV modes share in both urbanized areas results from the rise in remote work starting in 2020.

Table 4: Non-SOV Travel - Baseline & Full Performance Period Conditions

Urbanized Areas	2017 Baseline	2019	2021	4-year Targets	4-year Progress
San Francisco-Oakland UA	44.3%	47.2%	55.4%	**46.3%** (+2.0%)	**55.4%** (+11.1%)
San Jose UA	24.5%	25.5%	48.6%	**26.5%** (+2.0%)	**48.6%** (+24.1%)
Concord UA	*Not required this cycle*				
Santa Rosa UA					
Antioch UA					

Emissions Reductions

Baseline emissions reductions by pollutant from CMAQ-funded projects are cumulative emissions reductions from 2014 through 2017, as calculated by MTC staff for annual submittals to the CMAQ Public Access System. Emissions reductions for each project are credited in the first year that CMAQ funds are obligated on the project.

As shown in the table below and in **Attachment 1**, emissions reductions from CMAQ projects over the four years of the performance period have been significant. Estimated reductions have exceeded MTC's regional four-year targets for PM2.5, PM10, VOCs, and NOx, with estimated reductions in CO falling short of the four-year target by just 46 kilograms per day.

Table 5: Emissions Reduction Baseline and Full Performance Period Conditions

Pollutant (kg/day)	Reductions during Baseline Period 2014-2017	Reductions from 2018 – 2021*	4-year Targets	4-year Progress
Fine particulate matter – PM2.5	24.50	100.53	**16.53**	**100.53**
Particulate matter – PM10	31.29	207.09	**21.00**	**207.09**
Carbon monoxide – CO	31,046.04	14,916.98	**14,963.60**	**14,916.98**
Volatile organic compounds – VOCs	2,248.93	1,257.39	**897.70**	**1,257.39**
Nitrogen oxide – NOx	2,179.66	1,824.00	**962.58**	**1,824.00**

**Emissions reductions data from CMAQ Public Access System for 2018 through 2021 have been adjusted to correct for reporting errors. These errors include removing emissions reductions benefits from six projects, which had already been credited in the baseline period, adding emissions reductions from four projects that obligated or transferred to FTA but were not included in the CMAQ Public Access System, and correcting the emissions reductions reported for one project to account for a data entry error.*

CMAQ PROJECT ASSESSMENT

During the four years of the performance period, 80 projects obligated CMAQ funds. Of this total, 75 projects obligated CMAQ funds for the first time, contributing to the Bay Area's CMAQ emissions reductions targets for the performance period. **Attachment 1** includes a description of how each project is estimated to contribute towards MTC's four-year performance targets for traffic congestion and on-road mobile source emissions.

CMAQ Performance Plan

Full-Performance Period Report (2018-2021)

Obligated CMAQ Projects

Attachment 1
CMAQ Performance Plan: Full-Performance Period Report (2018-2021)

CMAQ Project Type Project Name	Sponsor	Year Obligated	Traffic Congestion Benefit?** Peak-Hour Excessive Delay	Traffic Congestion Benefit?** Non-SOV Mode Share	Estimated Emissions Reductions Program Total				
					PM2.5 Benefit kg/day	PM10 Benefit kg/day	CO Benefit kg/day	VOC Benefit kg/day	NOx Benefit kg/day
Bicycle and Pedestrian Facilities and Programs									
Adobe Creek/ Highway 101 Bicycle Pedestrian Bridge	Palo Alto	2019		Yes - Increase non-SOV travel	0.74	1.06	122.73	21.73	13.76
Arastradero Rd Schoolscape/Multiuse	East Palo Alto	2018		Yes - Increase non-SOV travel	0.74	1.06	122.73	21.73	13.76
Bay Rd Bicycle/Ped Imps	East Palo Alto	2018		Yes - Increase non-SOV travel	0.74	1.06	122.73	21.73	13.76
Better Bikeways	San Jose	2020		Yes - Increase non-SOV travel	0.86	1.21	141.14	24.99	15.83
Bike Share Capital Program	MTC	2019		Yes - Increase non-SOV travel	0.35	0.50	57.98	6.01	10.76
Broadway PDA Lighting Improvements	Burlingame	2020		Yes - Increase non-SOV travel	0.10	0.14	16.08	1.67	2.98
Clement Avenue Complete Streets	Alameda	2019		Yes - Increase non-SOV travel	0.41	0.58	67.41	6.98	12.51
Complete Streets Upgrade of Relinquished SR84	Fremont	2019		Yes - Increase non-SOV travel	0.57	0.80	93.48	9.68	17.35
East San Jose Bikeways	San Jose	2018		Yes - Increase non-SOV travel	1.49	2.11	245.47	43.46	27.52
East Sunnyvale Area "Sense of Place" Improvements	Sunnyvale	2018		Yes - Increase non-SOV travel	0.18	0.25	29.17	3.02	5.41
Eden Avenue Sidewalk Improvements	Campbell	2019		Yes - Increase non-SOV travel	0.08	0.11	12.40	1.28	2.30
El Cerrito Del Norte Area TOD Complete Streets Improvements	El Cerrito	2021		Yes - Increase non-SOV travel	0.66	0.93	108.11	11.20	20.06
Fair Oaks Avenue Bikeway - Phase 2	Sunnyvale	2018		Yes - Increase non-SOV travel	0.05	0.06	7.48	0.78	1.39
Francisco Boulevard East Sidewalk Widening	San Rafael	2021		Yes - Increase non-SOV travel	0.29	0.41	47.12	4.88	8.74
Fryer Creek Pedestrian and Bicycle Bridge	Sonoma	2021		Yes - Increase non-SOV travel	0.03	0.04	25.78	1.15	2.06
Grand Avenue Bicycle Pedestrian Improvements	San Rafael	2019		Yes - Increase non-SOV travel	0.53	0.75	87.46	15.48	9.81
Homestead Rd at Homestead High School Imps.	Sunnyvale	2021		Yes - Increase non-SOV travel	0.14	0.19	22.34	2.31	4.14
Hoover School Area Sidewalk Impvts (Summit Dr.)	Burlingame	2021		Yes - Increase non-SOV travel	0.09	0.13	15.64	1.62	2.90
Huntington Transit Corridor Bike/Ped Improvements	San Bruno	2019		Yes - Increase non-SOV travel	0.12	0.18	20.42	2.11	3.79
Java Dr Road Diet and Bike Lanes	Sunnyvale	2018		Yes - Increase non-SOV travel	0.03	0.04	4.78	0.50	0.89
Lakeside Family Streets	Oakland	2019		Yes - Increase non-SOV travel	0.39	0.55	63.57	6.59	11.80
Laurie Meadows Ped/Bike Safety Improvements	San Mateo	2021		Yes - Increase non-SOV travel	0.06	0.07	50.78	2.26	4.05
Lawrence Station Area Sidewalks & Bike Facilities	Sunnyvale	2018		Yes - Increase non-SOV travel	0.03	0.04	4.78	0.50	0.89
Los Gatos Creek Trail to Hwy 9 Trailhead Connector	Los Gatos	2019		Yes - Increase non-SOV travel	0.05	0.07	7.66	0.79	1.42
Maude Avenue Bikeway and Streetscape[(1)]	Sunnyvale	2018		Yes - Increase non-SOV travel	0.52	0.73	85.30	15.10	9.56
Middlefield Rd Bicycle/Pedestrian Imps.	Redwood City	2018		Yes - Increase non-SOV travel	1.31	1.85	215.03	38.07	24.11
Mission Road Bike/Ped Improvements	Colma	2020		Yes - Increase non-SOV travel	0.08	0.12	13.96	1.45	2.59
Montague Expy Ped Bridge at Milpitas BART	VTA	2018		Yes - Increase non-SOV travel	Benefits credited in prior year				
Monument Boulevard Class I Path	Concord	2020		Yes - Increase non-SOV travel	0.59	0.84	97.56	10.11	18.10
Moraga Way and Canyon/Camino Pablo Imps.	Moraga	2019		Yes - Increase non-SOV travel	0.08	0.12	13.56	1.40	2.52
Mt Pleasant Ped & Bike Traffic Safety Imps.	San Jose	2019		Yes - Increase non-SOV travel	0.14	0.19	22.34	2.31	4.14
Palmetto Sidewalk Extension	Pacifica	2020		Yes - Increase non-SOV travel	0.04	0.06	7.37	0.76	1.37
Paradise Drive Multiuse Path	Corte Madera	2021		Yes - Increase non-SOV travel	0.08	0.11	13.29	1.38	2.47
Ped. Enhancements Arroyo/Cedar & Hemlock/Orange	San Carlos	2020		Yes - Increase non-SOV travel	0.07	0.10	11.17	1.16	2.07
Peery Park "Sense of Place" Improvements	Sunnyvale	2018		Yes - Increase non-SOV travel	0.16	0.22	25.71	2.66	4.77

CMAQ Performance Plan

Full-Performance Period Report (2018-2021)

CMAQ Performance Plan: Full-Performance Period Report (2018-2021)

CMAQ Project Type Project Name	Sponsor	Year Obligated	Traffic Congestion Benefit?** Peak-Hour Excessive Delay	Traffic Congestion Benefit?** Non-SOV Mode Share	Estimated Emissions Reductions Program Total				
					PM2.5 Benefit kg/day	PM10 Benefit kg/day	CO Benefit kg/day	VOC Benefit kg/day	NOx Benefit kg/day
Pittsburg BART Pedestrian and Bicycle Connectivity	Pittsburg	2019		Yes - Increase non-SOV travel	0.52	0.74	86.44	8.96	16.04
Ralston Avenue Corridor Bike-Ped Imps	Belmont	2021		Yes - Increase non-SOV travel	0.06	0.07	51.45	2.29	4.10
Redwood-Fairgrounds Dr I/C (Multi-modal Imps.)	Solano County	2019		Yes - Increase non-SOV travel	0.01	0.02	2.13	0.22	0.39
San Anselmo Bike Spine	San Anselmo	2019		Yes - Increase non-SOV travel	0.04	0.05	6.01	0.62	1.11
San Bruno Ave Street Medians	San Bruno	2018		Yes - Increase non-SOV travel	0.55	0.78	90.21	15.97	10.11
San Ramon Valley Street Smarts	San Ramon	2020		Yes - Increase non-SOV travel	0.04	0.06	6.76	0.70	1.26
SF Safe Routes to School Non-Infrastructure	San Francisco	2019		Yes - Increase non-SOV travel	0.12	0.15	108.96	7.87	5.67
Sonoma Marin Area Rail Corridor (Petaluma Pathway)	SMART	2019		Yes - Increase non-SOV travel	Benefits credited in prior year				
Sonoma Safe Routes to School[1]	SCTA	2018		Yes - Increase non-SOV travel	0.04	0.05	5.91	0.99	0.72
Southside Complete Streets & Transit Improvement	Berkeley	2019		Yes - Increase non-SOV travel	0.60	0.85	98.95	10.25	18.36
SSF Citywide Sidewalk Gap Closure Project	South San Francisco	2018		Yes - Increase non-SOV travel	0.27	0.38	43.82	7.76	4.91
SSF Grand Boulevard Complete Streets (Phase III)	South San Francisco	2019		Yes - Increase non-SOV travel	0.14	0.19	22.34	2.31	4.14
Tully Road Safety Improvements	San Jose	2019		Yes - Increase non-SOV travel	0.38	0.55	63.39	6.57	11.76
US 101 Bike/Ped Overcrossing	Santa Rosa	2021		Yes - Increase non-SOV travel	0.19	0.27	31.67	3.28	5.88
US101/Holly St I/C Mod and Bike/Ped Overcrossing	San Carlos	2018		Yes - Increase non-SOV travel	0.14	0.19	22.44	2.32	4.16
Vista Grande Street Pedestrian Improvements/SR2S	Danville	2018		Yes - Increase non-SOV travel	0.12	0.17	19.27	3.41	2.16
West County Walk and Bike Leaders	Contra Costa County	2019		Yes - Increase non-SOV travel	0.08	0.11	12.53	1.30	2.33
W San Carlos Urban Village Streets Improvements	San Jose	2021		Yes - Increase non-SOV travel	0.20	0.26	184.30	8.21	14.70
Woodside School Safety Pathway Phase 3	Woodside	2019		Yes - Increase non-SOV travel	0.02	0.03	3.05	0.32	0.57
Congestion Reduction and Traffic Flow Improvements									
Freeway Performance Program: US 101 Ramp Metering	Caltrans/MTC	2019	Yes - Reduce peak hour delay		0.18	0.23	164.78	5.12	15.37
Regional Program for Arterial System Synch. (PASS)	MTC	2018	Yes - Reduce peak hour delay		5.20	7.38	857.19	130.62	117.26
Solano I-80 Managed Lanes	STA	2021	Yes - Reduce peak hour delay		32.35	76.51	2,701.64	261.80	312.32
Sunnyvale/Saratoga Traffic Signal, Bike/Ped Safety	Sunnyvale	2018	Yes - Reduce peak hour delay		0.39	0.55	64.31	11.39	7.21
US 101 HOV Lanes - Marin Sonoma Narrows	TAM	2021	Yes - Reduce peak hour delay		26.36	62.34	2,201.18	213.30	254.46
Demand Management									
Carshare 4 All[2]	CCTA	2018		Yes - Increase non-SOV travel	0.94	1.75	155.61	20.14	24.85
Regional Car Sharing	MTC	2019		Yes - Increase non-SOV travel	0.14	0.18	126.58	7.69	8.05
Solano Mobility Call Center	STA	2018		Yes - Increase non-SOV travel	0.03	0.04	29.59	1.98	1.70
Spare the Air	BAAQMD	2019		Yes - Increase non-SOV travel	0.21	0.27	193.67	13.99	10.08
Spare the Air Youth	MTC	2018		Yes - Increase non-SOV travel	0.12	0.29	10.07	1.24	0.90
Targeted Transportation Alternatives	MTC	2019		Yes - Increase non-SOV travel	0.04	0.05	35.16	2.14	2.24
Alternative Fuels and Vehicles									
Electric Vehicle Programs and Outreach	BAAQMD	2019			4.24	5.39	3,839.15	139.38	337.90
I/M and Other TCMs									
I-880 Integrated Corridor Management - Central	MTC	2018	Yes - Reduce peak hour delay		1.29	1.83	212.61	15.36	46.12
I-880 Integrated Corridor Management - North	MTC	2018	Yes - Reduce peak hour delay		2.97	4.21	489.42	23.07	118.45
Transit Improvements									
Caltrain Electrification	Caltrain	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	Benefits credited in prior year				

CMAQ Performance Plan

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CMAQ Performance Plan: Full-Performance Period Report (2018-2021)

CMAQ Project Type Project Name	Sponsor	Year Obligated	Traffic Congestion Benefit?** Peak-Hour Excessive Delay	Traffic Congestion Benefit?** Non-SOV Mode Share	Estimated Emissions Reductions Program Total PM2.5 Benefit kg/day	PM10 Benefit kg/day	CO Benefit kg/day	VOC Benefit kg/day	NOx Benefit kg/day
El Camino Real Traffic Signal Priority Project	SamTrans	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	2.94	6.94	245.15	8.41	43.69
Geary Bus Rapid Transit	SFMTA	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	Benefits credited in prior year				
Solano Express Vehicle Replacement	STA	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.29	0.41	47.10	7.46	6.16
San Pablo/Telegraph Rapid Bus	AC Transit	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	3.27	7.72	272.70	9.35	48.60
Santa Clara Pocket Track Light Rail	VTA	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.57	1.35	47.55	0.70	9.41
San Rafael Transit Center Relocation(1)	GGBHTD	2019	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.53	0.75	86.60	1.73	23.31
Santa Rosa CityBus: Reimagining City Bus	Santa Rosa CityBus	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	Benefits credited in prior year				
Santa Rosa CityBus: Enhancements	Santa Rosa CityBus	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.35	0.82	28.88	0.99	5.15
Union City Transit Travel Time Improvements(1)	Union City Transit	2019	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.15	0.21	24.53	3.74	3.36
Vine Transit Bus Maintenance Facility	NVTA	2021	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	1.81	4.28	151.09	5.18	26.93
West Grand Ave Transit Signal Priority	MTC	2018	Yes - Reduce peak hour delay	Yes - Increase non-SOV travel	0.84	1.99	70.26	2.41	12.52

	Project Total	Peak-Hour Delay** Project Total	Non-SOV Mode Share** Project Total	Estimated Emissions Reductions Program Total PM2.5 Benefit kg/day	PM10 Benefit kg/day	CO Benefit kg/day	VOC Benefit kg/day	NOx Benefit kg/day
Obligated 2018 & 2019	**60**	**17**	**54**	**36.43**	**58.95**	**9,018.55**	**697.69**	**1,116.98**
Obligated 2020 & 2021	**20**	**3**	**18**	**64.10**	**148.14**	**5,898.43**	**559.70**	**707.02**
PERFORMANCE PERIOD TOTAL	**80**	**20**	**72**	**100.53**	**207.09**	**14,916.98**	**1,257.39**	**1,824.00**

* For the emissions benefits targets, only projects that obligate CMAQ funds for the first time during the current performance period can be credited towards performance achievements during the period. Projects that have obligated CMAQ funds in prior years can still be credited for performance achievements of the traffic congestion targets.

** Benefits categorized by project type.

Project Notes:

(1) Project does not appear to have been included in the CMAQ Public Access System, but obligated CMAQ funds (or transferred to FTA) for the first time in 2018 or 2019.

(2) Emissions benefits corrected after submission to CMAQ Public Access System, as data values had been incorrectly reported.