CMAQ PERFORMANCE PLAN

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Introduction

The purpose of this report is to document how Congestion Mitigation and Air Quality (CMAQ) transportation funding for projects allocated in the Mountainland Association of Governments (MAG) region help to meet the region's two and four-year targets for on-road mobile source emissions.

23 United States Code (U.S.C) 149(l) requires each MPO serving a transportation management area (TMA) with a population over 1,000,000 that includes a nonattainment or maintenance area to develop a CMAQ Performance Plan to support the implementation of the CMAQ measures. Although the Provo-Orem TMA within MAG will not reach the 1,000,000 population threshold for decades, a sliver within MPO containing a small subdivision overlaps the Salt Lake Non-attainment area. MAG is thus required to create a CMAQ performance plan, even though Salt Lake's MPO has their own CMAQ performance plan. MAG anticipates Urbanized Area boundary changes that will place this portion of the Salt Lake Non-attainment area in the adjacent MPO's boundaries, after which MAG should no longer be required to submit a CMAQ Performance Plan.

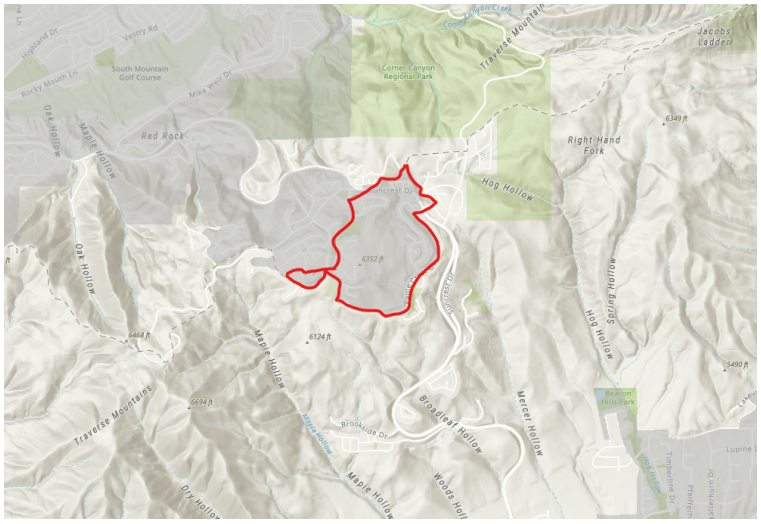


Figure 1. Section Salt Lake/West Valley Urbanized Area within MAG's boundaries.

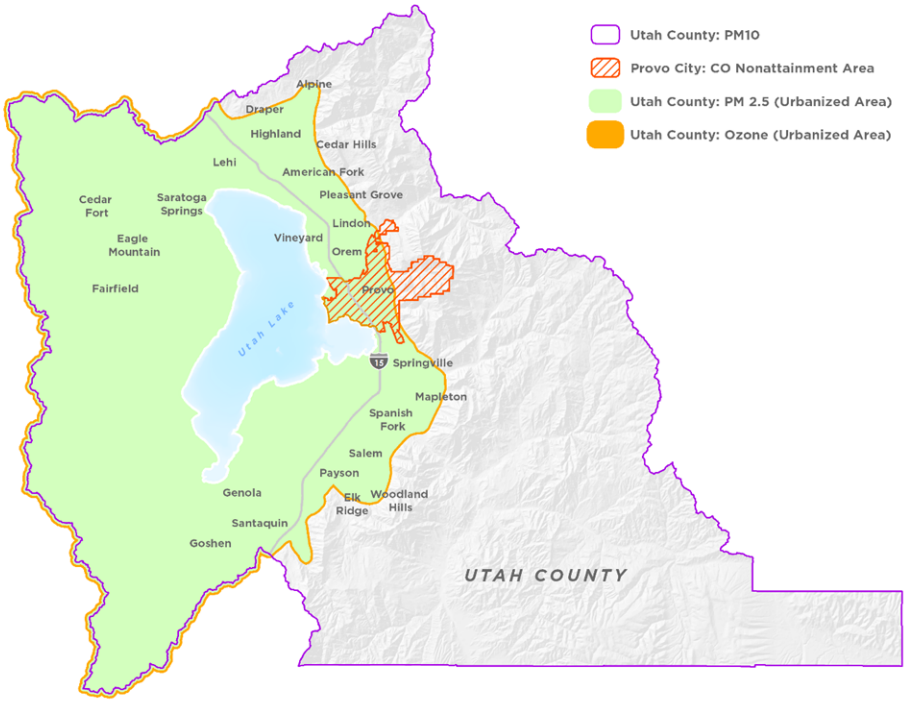
CMAQ Performance Plans include the following (23 CFR 490.107)

1) A Baseline Measure
2) 2 and 4 year Targets (2024 and 2026)
3) Description of projects
4) Assessment of progress for the mid and full performance period report, including an assessment of how the CMAQ projects contribute toward achieving the targets.

Below is a description of MAG's Non-attainment and Maintenance areas

Table 1

Pollutant	**Status**	**Action**
Carbon Monoxide (CO)	In 2nd decade of Maintenance Plan	Only qualitative analysis required for Regional Transportation Plans
Ozone (Precursor Pollutants are NOx and VOC)	Marginal Non-attainment	Working with the State to submit a 10-yr maintenance plan
PM2.5 (Particulate Matter with a diameter of 2.5 microns)	EPA is in the process of approving a Maintenance Plan	Perform a quantitative analysis of emissions with each Regional Transportation Plan
PM10 (Particulate matter with a diameter of 10 microns)	In 1st decade of Maintenance Plan	Perform a quantitative analysis of emissions with each Regional Transportation Plan



Baseline Condition

The baseline condition is the cumulative emissions reductions of CMAQ projects from 2018-2021 as reported in the CMAQ Public Access System for each criteria pollutant. Emissions reductions were estimated using the FHWA CMAQ Emissions Calculator Toolkit where possible, else grams/mile emissions from the MOVES model in combination with Vehicle Miles Travelled (VMT) reduction estimates for projects that were submitted before the CMAQ Emissions Calculator Toolkit was available for their project type.

Table 2

Pollutant	Baseline Condition (2018-2021 CMAQ Projects kg/day emission reduction)
CO	366.051
NOx	73.44
VOC	15.133

PM2.5	2.677
PM10	8.145

Targets

For the performance periods, between 2022-2023 and 2022-2026, MAG added the daily emissions reductions for projects in each period as reported to the CMAQ Public Access System. MAG coordinated with UDOT to establish these targets for the CMAQ on-road emissions measures. MAG anticipates receiving approval of the targets prior to the October 1 deadline for inclusion in the State DOT Baseline Performance Period Report.

Table 3 – Established State CMAQ-focused 2 and 4-year Targets in cumulative kg/day

Pollutant	2-Year Target (2022, 2023)	4-Year Target (2022-2026)
CO	0.177	174.932
NOx	0.164	10.037
VOC	0.028	9.626
PM10	0.014	2.386
PM2.5	0.013	0.614

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$$Total\ Emission\ Reduction_p = \sum_{i=1}^{T} Daily\ Kilograms\ of\ Emission\ Reductions_{p,i}$$

Where:
i = applicable projects reported in the CMAQ Public Access System for the first 2 Federal fiscal years of a performance period and for the entire performance period, as described in in § 490.105(e)(4)(i)(B);
p = criteria pollutant or applicable precursor: PM2.5, PM10, CO, VOC, or NOx; Daily Kilograms of Emission Reductions p,
i = total daily kilograms, to the nearest one thousandths, of reduced emissions for a criteria pollutant or an applicable precursor "p" in the in the first year the project is obligated;
T = total number of applicable projects reported to the CMAQ Public Access System for the first 2 Federal fiscal years of a performance period and for the entire performance period, as described in § 490.105(e)(4)(i)(B); and Total Emission Reduction
pp= cumulative reductions in emissions over 2 and 4 Federal fiscal years, total daily kilograms, to the nearest one thousandths, of reduced emissions for criteria pollutant or precursor "p."

This equation means that the cumulative emission reductions (kg/day) for all CMAQ funded projects reported to the CMAQ Public Access System are summed over 2 and 4 Federal fiscal years for each of the applicable criteria pollutants or precursors within the applicable area.

Description of Projects

The MAG Regional Planning Committee coordinates with local stakeholders to select CMAQ projects for deployment in the MAG nonattainment areas. These projects are selected to meet the program goals of reducing congestion and/or reducing emissions of precursor pollutants. Emissions reductions for these projects are estimated by MAG using FHWA's CMAQ Emissions Calculator Toolkit when available. The results from these analyses are then uploaded into the CMAQ Public Access System upon the obligation of funding to projects and are accounted for in the expected benefits outlined in the table below.

According to 23 U.S.C. 149(l), MAG reports targets for all criteria and precursor pollutants in its maintenance and non-attainment areas, namely CO, VOC, NO_x, , PM10 and PM 2.5.

Table 4 – Expected Benefits of CMAQ Projects in the MAG Region in kg/day

Map# | Project Information	Project Description	Total $	Year Built	VOC	CO	NOx	PM10	PM2.5
Utah Lakeshore Trail-Vineyard 300 S to Orem 1200 S	A new 10-foot wide trail from the Town of Vineyard's southern boundary to the Orem Intermodal Hub, and south to a new trailhead and future viewing tower.	4,000,000	2024	6.31	127.69	8.54	1.65	0.43
UTA On-board Technology System	Develop/install new mobile data device software and hardware for all UTA transit vehicles. This provides real time info to customers.	321,785	2022	na	na	na	na	na
Payson 100 N/Main ST NW Bus Pullout	A new 100' long pull out area for buses to safely exit and re-enter traffic along SR-198, improving conditions for transit users, vehicles, and cyclists.	292,000	2022	0.03	0.14	0.16	0.01	0.01
UTA Utah Valley Bus Stop Improvements Phase 3	Bus stop improvements expected to attracts 7 new riders each day and decrease paratransit trips by 9.	364,261	2023	0.00	0.04	0.00	0.00	0.00
Provo 900 E UVX Station	New Bus Rapid Transit Station near BYU Creamery will provide service to several new high-visitor facilities on the BYU campus as well as the existing facilities in the area.	1,893,315	2025	2.47	35.32	1.00	0.54	0.13

UTA Park and Ride Lot EM/SS Area	New 180 stall Park and Ride Lot(s) in the Eagle Mountain/Saratoga Springs area public transit service in Eagle Mountain and Saratoga Springs.	900,000	2026	0.82	11.74	0.33	0.18	0.04
Total Reductions				**9.63**	**174.93**	**10.04**	**2.39**	**0.61**