
CHAPTER 6

AIR QUALITY

INTRODUCTION

This chapter describes the status of the air pollutants that affect the Rogue Valley, and how the RVMPO's RTP complies with the federal air quality regulations for transportation conformity.

To receive transportation funding or approvals from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), state and local transportation agencies with plans, programs or projects in nonattainment or maintenance areas must demonstrate that they meet the transportation conformity requirements of the federal Clean Air Act, as implemented in specific federal and state transportation conformity rules. To meet the requirements, Metropolitan Planning Organizations (MPOs) must show that the anticipated emissions resulting from implementation of transportation plans, programs and projects are consistent with and conform to the purpose of the State Implementation Plan (SIP) for air quality. A SIP is a plan mandated by the Clean Air Act and developed by the state that contains procedures to monitor, control, maintain and enforce compliance with the National Ambient Air Quality Standards. SIPs are required to be developed once a region has violated the standards.

Within the RVMPO area, demonstration of conformity to two SIPs is required: a carbon monoxide limited maintenance plan, or SIP, within the Medford Urban Growth Boundary (UGB) of 2002, and a particulate (PM₁₀) plan within the entire RVMPO planning area. The RVMPO is required to show through analysis that through the horizon of the plan (to 2042) and with the growth the plan forecasts, the standards and requirements of the SIPs will be maintained.

The full analysis is contained in a separate document, The Rogue Valley Metropolitan Planning Organization Air Quality Conformity Determination (AQCD). The AQCD document describes the current status of the two pollutants the RVMPO must report on, the state and federal legal requirements and how the RVMPO met those requirements.

6.1 AIR QUALITY CONFORMITY

An Air Quality Conformity Determination (AQCD) is required whenever the Regional Transportation Plan (RTP) or Transportation Improvement Program (TIP) is updated, or every four years, whichever comes first. The U.S. Department of Transportation (USDOT) found the current 2013-38 RTP in conformance on April 26, 2013. USDOT must make the conformity determination before the plan and program can go into effect.

In the Rogue Valley Metropolitan Planning Organization area, the conformity document must show that through the horizon of the plan and program air quality requirements for carbon monoxide (CO) and particulate matter (PM₁₀) will be met. Specifically:

Carbon Monoxide—The area encompassed by the Medford urban growth boundary (UGB) was re-designated from nonattainment to attainment by the U.S. Environmental Protection Agency (EPA) in 2002, and a limited maintenance plan approved in 2016.

PM₁₀—The area within the Medford-Ashland Air Quality Maintenance Area, which is entirely within the RVMPO planning area, was re-designated from nonattainment to attainment by EPA in 2006.

Although the conformity area for each pollutant differs, the process for showing conformity is similar. Analysis by the RVMPO found that through the horizon of the RTP (2042) and the TIP (2021), and in intervening years, emissions from transportation will not exceed emission budgets, as shown in the table below.

Actions to be Taken

The RVMPO Policy Committee, as the policy board for the federally designated Metropolitan Planning Organization in the urbanized area that includes Medford and Ashland, must formally adopt the findings described in this report. Then USDOT and the federal Environmental Protection Agency confer on the analysis. Ultimately, USDOT will make a conformity determination based on this document. At that time, the RVMPO's 2017-2042 plan will go into effect, as will any necessary amendment to the 2018-2021 TIP.

Basis of the Analysis

The analysis uses computer models to project the amounts of CO and PM₁₀ anticipated in the respective control areas from on-road transportation. The region's travel demand model, developed jointly by RVMPO and ODOT, estimates the amount of vehicle travel anticipated, expressed as vehicle miles traveled (VMT). Emission factors are generated using an EPA-approved model. From these calculations, future emissions are estimated. The model takes into account several key factors that can change over time including population and employment growth, land-use changes, changes to the transportation system and motor vehicle technology.

Details of the Air Quality Conformity Determination

This report shows that with the implementation of the 2042 RTP and 2021 TIP all current federal and state requirements for on-road transportation emissions within the planning area will be met. For the Medford UGB area, this means that on-road transportation-related emissions of CO will not exceed the budget for CO established by Oregon Department of Environmental Quality and approved by EPA in 2002. For the entire Medford-Ashland Air Quality Maintenance Area, an area within the RVMPO planning area, PM₁₀ emissions from on-road transportation will not exceed the

budget set by ODEQ and approved by EPA in 2006. This means that transportation projects will not impede the area in continuing to meet air quality requirements.

STATUS OF AIR POLLUTANTS

The Medford Urban Growth Boundary (UGB) is a maintenance area for carbon monoxide (Medford CO maintenance area) and the Medford-Ashland Air Quality Maintenance Area is a maintenance area for particulate matter of less than 10 microns (PM₁₀). See Map 6.1.1 on page 6-6 for more detail. Air quality for all other criteria pollutants meets the NAAQS and demonstration of conformity for these pollutants is not required. Rogue Valley Council of Governments (RVCOG) is the responsible agency for CO and PM₁₀ conformity for state purposes.

STATUS OF CO

EPA approved the Medford CO maintenance plan (State Implementation Plan or SIP), with a daily transportation emissions budget effective Sept. 23, 2002. The boundary of the Medford CO maintenance area is the Medford Urban Growth Boundary, as shown on Map 6.1.1. The CO SIP also mandates a motor vehicle Inspection and Maintenance (I&M) program covering the entire Medford-Ashland Air Quality Maintenance Area (AQMA). All gasoline-powered motor vehicles registered to owners living within the Medford-Ashland AQMA must have vehicle emissions and on-board diagnostic systems tested biennially. There has not been a violation of the CO NAAQS in the maintenance area since 1991. While these data show that CO levels are in compliance with the NAAQS, demonstration of conformity relies upon compliance with the federal and state conformity regulations.

In December, 2015, the Oregon Department of Environmental Quality (ODEQ) submitted a Carbon Monoxide Limited Maintenance Plan (LMP) for the Medford area to EPA for approval. To be eligible for a CO LMP, an area has to have a design value at or below 7.65 ppm. Based on ODEQ's review of the 2008 – 2009 CO emissions data for Medford the area met the requirements for an LMP. The CO LMP went into effect on September 19, 2016. With the approval of the CO LMP, the area is exempt from performing a regional emissions analysis for CO and there is no "budget" test. The CO Maintenance area, however, must meet project level conformity analyses, and must respond to transportation conformity criteria in 40 CFR 93 Subpart A.

STATUS OF PM₁₀

EPA approved the PM₁₀ maintenance plan (State Implementation Plan or SIP) for the Medford-Ashland AQMA effective Aug. 18, 2006. The plan establishes an annual transportation emissions budget. The Medford-Ashland PM₁₀ AQMA is shown on Map 6.1.1.

There have been no violations of the NAAQS for PM₁₀ since 1993. As with CO conformity, demonstration of PM₁₀ conformity relies on compliance with federal and state conformity regulations.

CONFORMITY FINDINGS

The AQCD for this plan shows that with the implementation of the RVMPO 2017-2042 Regional Transportation Plan and 2018-2021 Transportation Improvement Program current federal air quality standards for regional transportation conformity will continue to be met in Medford and in the Medford-Ashland Air Quality Maintenance Area.

CO LIMITED MAINTENANCE PLAN CONFORMITY CRITERIA

On September 19, 2016, US-EPA approved a CO maintenance plan, known as a "limited maintenance plan" (LMP) for the Medford area. This limited maintenance plan has a 2025 horizon year. Because of the approved LMP, the Rogue Valley MPO no longer has to complete a regional emissions analysis for the Medford area for CO pursuant to 40 CFR 93.109(e).

However, all other transportation conformity requirements under 40 CFR 93.109(b) continue to apply. This RTP and TIP conformity determination meets all applicable requirements under the conformity rule as described below.

40 CFR 93.104 *Frequency of conformity determinations.*

Conformity of transportation plans and TIPS must be determined no less frequently than every four years. Conformity of plan and TIP amendments, except for those that add or delete exempt projects, must be demonstrated prior to approval of the action. All FHWA/FTA projects must be found to conform or must be re-conformed following any significant status or scope change, before they are adopted, accepted, approved or funded.

The conformity determination is for the RVMPO 2017 - 2042 Regional Transportation Plan (RTP) and the 2018-2021 Transportation Improvement Program (TIP). The next RTP update will occur in four years (March 2021).

40 CFR 93.105 *Consultation*

Interagency consultation procedures must be carried out in accord with OAR 340-252-0060 and the MPO's public involvement policies developed under 23 CFR Part 450.

A Pre-Analysis Consensus Plan and a draft of this document along with the project list (Appendix B) was circulated by the MPO to ODOT, US-EPA, and USDOT (FHWA and FTA) during interagency consultation. The air quality implications of each project were reviewed to determine which projects had the potential for hot spot requirements.

Public notice was provided on the MPO's web site and through emails to interested parties in the region. A public hearing was held at the policy committee review meeting, and the 30-day public comment period required by the MPO's Public Participation Plan was held.

The RVMPO Technical Advisory Committee (TAC), the standing committee for interagency consultation, reviewed the project list and subsequently reviewed the

results of the public comment period and the interagency consultation. No comments were provided at the public hearing or were submitted during the public comment period.

The project sponsor is responsible for assuring the conformity of FHWA/FTA projects and regionally significant projects in the RTP or TIP for which hot spot analysis is required. The project sponsor is also responsible for distributing draft and final project environmental documents prepared by the project sponsor to other agencies. It is the responsibility of the project sponsor to consult with the affected transportation and air quality agencies prior to making a project level conformity determination. These activities occur during the project design planning phase.

40 CFR 93.108 *Transportation plans and TIPs must be fiscally constrained.*

Fiscal constraint is described and affirmed in the 2042 RTP and the 2018-2021 TIP.

For the Medford PM₁₀ maintenance area, all non-exempt projects in the 2017-42 RTP and the 2018-2021 Transportation Improvement Program within the Medford-Ashland Air Quality Maintenance Area were reviewed under the interagency consultation process.

PM₁₀ EMISSIONS ANALYSIS

Analysis of future travel conditions shows that estimates of emissions of particulate matter (PM₁₀) within the Air Quality Maintenance Area are lower than permitted in corresponding state maintenance plans, which set emissions budgets. The table below show emissions budgets and summarizes estimated particulate matter emissions. As shown, RTP/TIP emissions in all applicable analysis years under both transit cases are well below the established motor vehicle PM10 emission budgets. Across all analysis scenarios, total motor vehicle PM₁₀ emissions are less than 55% of the budgets.

Table 6.1.1: Estimates of Particulate

Analysis Year	2017	2027	2037	2042
PM ₁₀ Budget	3,754 tons/year	3,754 tons/year	3,754 tons/year	3,754 tons/year
Estimated PM ₁₀ Emissions <i>With</i> Transit Service	1,559 tons/year	1,732 tons/year	1,939 tons/year	2,049 tons/year
Estimated PM ₁₀ Emissions <i>Without</i> Transit Service	1,561 tons/year	1,733 tons/year	1,941 tons/year	2,052 tons/year

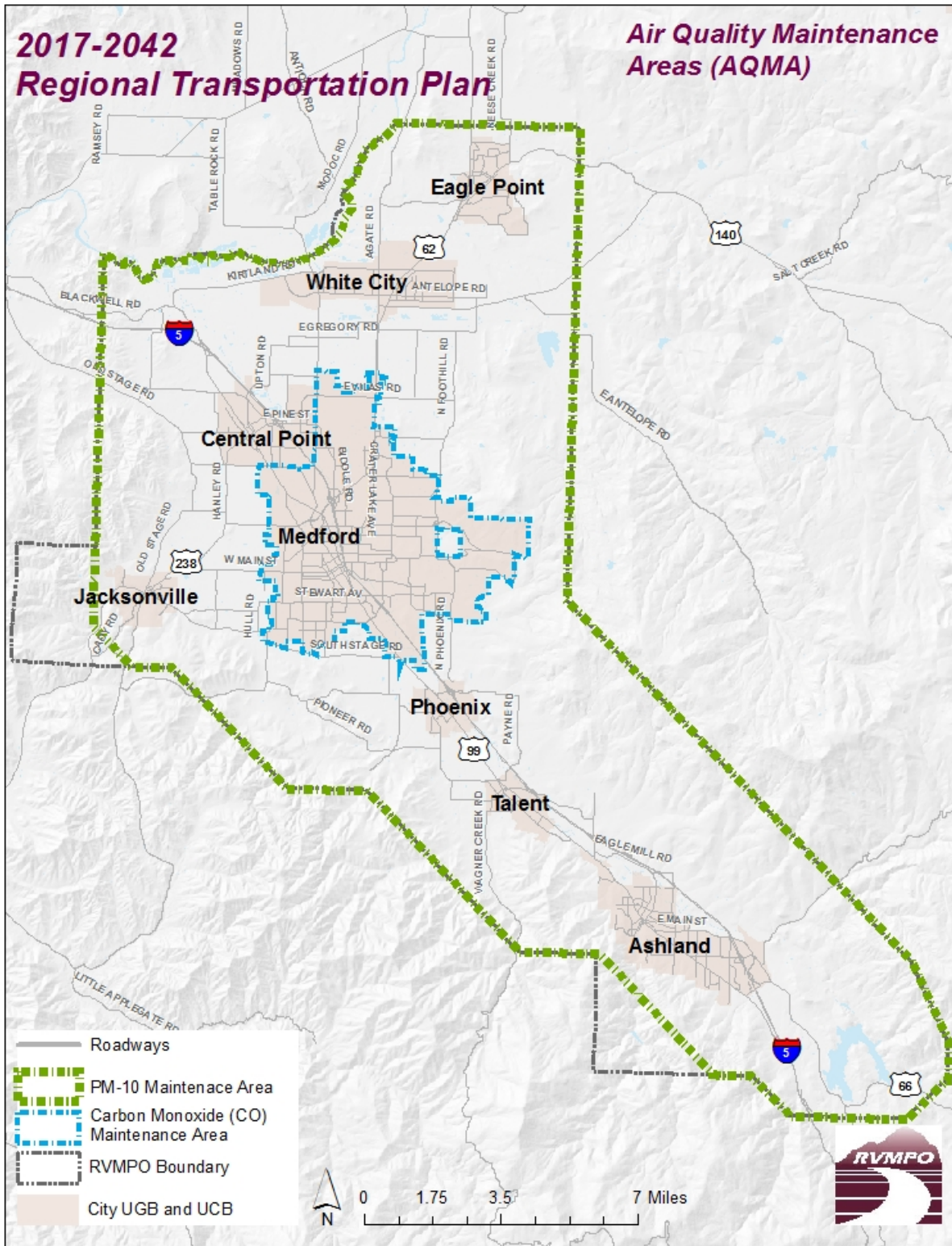
Specifically, the analysis shows that the PM₁₀ emission budget in the SIP will not be exceeded. The budget serve as limits guaranteeing that if a region remains with the budget, Clean Air Act standards will be met.

Because this plan identifies financial uncertainties about the future of transit service, federal and state agencies asked the RVMPO to demonstrate conformity with and without transit service. The financial analysis finds that identified funds expected to be available are not sufficient to maintain existing transit service. Therefore existing service is not fiscally constrained and cannot be included in the RTP. Additional funds

could be identified in the future to prevent service reductions, at which point the RTP would be amended. The AQCD was developed to address this range of transit options.

The AQCD shows the extremes of what could transpire. Elimination of all transit is not expected, but RVTD does not have service reduction plans. For the air quality emissions analysis, the RVMPO Version 4.2 travel demand model was run with and without the transit service inputs. The "with transit" scenario envisions existing transit service (without the expanded evening and Saturday service funded through 2042). The second analysis estimated emissions without transit.

Map 6.1.1: Air Quality Maintenance Areas



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