APPENDIX J:
Conformity Determination

CONFORMITY DETERMINATION

February 23, 2018

GREAT FALLS AREA

Long Range Transportation Plan - 2018 Update

Prepared By:
Robert Peccia & Associates
Helena, Montana
www.rpa-hln.com

TABLE OF CONTENTS

CONFORMITY DETERMINATION

1.0 INTRODUCTION

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 were signed into law. The CAAA is a detailed and complex law that has had a major impact on the programs of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The Act requires substantial vehicle emissions reductions from the transportation sector.

The purpose of the conformity provision of the CAAA is to ensure consistency between the Federal transportation planning process and Federal air quality planning process. The regulations require that for an urban area designated as nonattainment of National Ambient Air Quality Standards (NAAQS) for transportation-related criteria pollutants, or which has a maintenance plan for such pollutants, a conformity determination must be conducted to demonstrate that its long-range transportation plan (LRTP), transportation improvement plan (TIP), or any revisions to either will not adversely affect air quality[1]. Transportation-related criteria pollutants for areas designated as nonattainment, or which have a maintenance plan, may include the following[2]:

1. Criteria pollutants including ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}); and particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers ($PM_{2.5}$).
2. Precursor pollutants including:
    i. Volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in ozone areas;
    ii. NO_X in NO_2 areas;
    iii. VOCs and/or NO_X in PM_{10} areas if the EPA Regional Administrator or the director of the State air agency has made a finding that transportation-related emissions of one or both of these precursors within the nonattainment area are a significant contributor to the PM_{10} nonattainment problem and has so notified the MPO and DOT, or if the applicable implementation plan (or implementation plan submission) establishes an approved (or adequate) budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy;
    iv. NO_X in $PM_{2.5}$ areas, unless both the EPA Regional Administrator and the director of the state air agency have made a finding that transportation-related emissions of NO_X within the nonattainment area are not a significant contributor to the $PM_{2.5}$ nonattainment problem and has so notified the MPO and DOT, or the applicable implementation plan (or implementation plan submission) does not establish an approved (or adequate) budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy; and
    v. VOCs, sulfur dioxide (SO_2) and/or ammonia (NH_3) in $PM_{2.5}$ areas either if the EPA Regional Administrator or the director of the state air agency has made a finding that transportation-related emissions of any of these precursors within the nonattainment area are a significant contributor to the $PM_{2.5}$ nonattainment problem and has so notified the

[1] 40 CFR 93.102(a)
[2] 40 CFR 93.102(b)

MPO and DOT, or if the applicable implementation plan (or implementation plan submission) establishes an approved (or adequate) budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy.

A Conformity Determination was previously made for the *Great Falls Area Long Range Transportation Plan – 2014* based on the *Air Quality Conformity Determination Technical Memorandum* prepared by Cambridge Systematics, Inc. on November 27, 2013. Information from the Technical Memorandum and **Chapter 12** of the 2014 LRTP was reviewed and subsequent changes in the status of the Great Falls CO Maintenance Area, CO monitoring strategies, and administrative actions relevant to the Maintenance Area were identified to produce this updated *Conformity Determination* memorandum.

2.0 ADMINISTRATIVE BACKGROUND

On September 9, 1980, the United States Environmental Protection Agency (EPA) designated Great Falls as non-attainment for carbon monoxide (CO). The designation followed sixteen violations of the NAAQS 8-hour CO standard at an air quality monitor on 10th Avenue South. The NAAQS for CO is 9.0 parts per million (ppm) for an 8-hour average concentration, not to be exceeded more than once per calendar year. Consensus between EPA and local officials established the 10th Avenue South corridor as the nonattainment boundary in lieu of the city limits. Following the non-attainment designation, control plans were developed, but none were approved by EPA. The 1977 emissions inventory listed motor vehicle emissions, wood smoke, and industrial processes as the primary contributors to the CO violations. The March 9, 1984 control plan demonstrated attainment based on projected automobile emissions reductions and a significant reduction in CO from the former Phillips Refinery, now Calumet Montana Refining. That control plan was withdrawn due to the failure of the refining company to modify its catalytic cracking unit. A second control plan was submitted to EPA on March 28, 1986. On January 26, 1987, EPA proposed to approve the Great Falls CO control plan. However, Great Falls missed the December 31, 1987 attainment deadline, (meaning Great Falls had a violation of the standard in 1987), and the *Montana CO State Implementation Plan* (SIP) was ruled inadequate, resulting in a “SIP call” for the Great Falls CO nonattainment area on May 26, 1988.

On September 7, 1990, EPA published two actions regarding the Great Falls element of the SIP. EPA published a proposed rule that would disapprove the attainment demonstration contained in the March 28, 1986 SIP revision. However, EPA never took final action on that proposed rule. EPA also published a final rule on September 7, 1990 that approved the CO control measures from the March 28, 1986 SIP revision for their strengthening effect on the SIP. Great Falls was reevaluated in September 1990, based on the 1990 CAAA and the lack of exceedances in the CO monitoring data for 1988 and 1989. On November 6, 1991, EPA designated Great Falls as a “not classified” CO non-attainment area. However, redesignation to attainment required a new emission inventory and the development of a maintenance plan, which the Montana Department of Environmental Quality (DEQ) subsequently developed.

In 1998, DEQ submitted a 1996 Inventory Preparation Plan to Federal, State and local agencies for review and comment. Subsequently, DEQ submitted the 1996 base year emission inventory to EPA in February 2000, along with a ten-year maintenance plan and a request to redesignate Great Falls as an attainment area. On July 8, 2002, EPA redesignated Great Falls as a “limited maintenance plan” attainment area.

With the redesignation to attainment, Great Falls was required to comply with the provisions of the December 19, 2000 *Carbon Monoxide Limited Maintenance Plan* (December 2000 LMP) and submit a CAA section 175A(b) required revised maintenance plan in 2010 that provided for maintenance of the CO

standards for an additional ten years. Provided Great Falls does not have any further CO NAAQS violations during the maintenance period, it can request full attainment status.

The Montana DEQ submitted an updated *Great Falls Carbon Monoxide Limited Maintenance Plan* (2011 LMP Submittal) on July 13, 2011, as required by 42 USC 7505(a). The 2011 LMP Submittal documents the first ten years of CO monitoring under the December 2000 LMP, and details strategies for maintaining CO standards for the subsequent ten years. As such, the 2011 LMP Submittal document fulfilled the criteria established in 40 CFR Part 51, Appendix V.

On June 22, 2012, the Montana DEQ submitted SIP revisions that included an alternative CO monitoring strategy documented in the 2011 LMP Submittal. Ambient CO levels have decreased significantly due to federal tailpipe standards and turnover of the vehicle fleet in the United States. Therefore, the DEQ determined that the using the resource-intensive CO analyzers to confirm CO levels was not justifiable. The alternative CO monitoring method includes an annual review of traffic volumes using data from MDT permanent automatic traffic recorders (ATR) in Great Falls. Thresholds are defined based on the percent increase in consecutive, rolling 3-year ADT volumes and correlated to presumed changes in ambient CO concentrations. The DEQ worked closely with EPA Region 8 staff to develop the alternative CO monitoring methodology to ensure that CO LMP areas maintain compliance with national standards. The procedures are presented in the document entitled *State of Montana Alternative CO Monitoring Strategy.*

On May 1, 2015, EPA approved the revised Great Falls Maintenance Plan submitted on July 13, 2011. The maintenance plan meets the applicable CAA requirements and EPA determined it is sufficient to provide for maintenance of the NAAQS for CO over the course of the second 10-year maintenance period out to 2022. The May 1, 2015 action by EPA also approved the State's alternative CO monitoring strategy for the Great Falls CO maintenance area submitted on June 22, 2012. With this approval, the revised Great Falls CO Maintenance Plan (the 2011 LMP submittal) is the controlling document for this air quality conformity determination.

The following conformity determination was made in accordance with the above referenced Federal regulations. The determination is for CO and applies to the *Great Falls Area Long Range Transportation Plan - 2018 Update* and the *Carbon Monoxide State Implementation Plan* for the State of Montana. As of the date of this conformity determination, the Great Falls urban area is not designated as a nonattainment or maintenance area for any other air pollutant.

3.0 CONFORMITY DETERMINATION

3.1. Interagency Consultation

This conformity determination follows the general consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17.8 Subchapter 13 Conformity). These rules incorporate by reference Federal regulations contained in 40 CFR Part 93, Subpart A. This consultation generally involved a cooperative and coordinated process including the Montana Department of Transportation (MDT), the Montana DEQ and the Great Falls City-County Planning Board.

The Montana DEQ and MDT coordinate regarding air quality and transportation conformity on behalf of metropolitan planning organizations (MPO) such as the Great Falls City-County Planning Board. Coordination is conducted in accordance with applicable Federal code (40 CFR 93) and state administrative rules (ARM Title 17, Chapter 8, Subchapter 13). Coordination typically takes the form of consultation through letter correspondence between the state agencies.

Air quality planning is an integral part of the Great Falls transportation planning process. As such, air quality has received specific attention during development of the numerous plans, programs and projects of the process. Unified Planning Work Programs have included specific annual work activities dealing with addressing the initial CO problem on 10th Avenue South and the preparation of revisions to the SIP. Any additional activities required to address past CO problems on 10th Avenue South will be completed under *Work Element 100: Transportation Program Administration & Participation*[3]. Additionally, *Work Element 302: Transportation Plans, Analyses, Assessments & Consistency Determinations* presents procedures to assure consistency/conformity between air quality and transportation planning plans and programs, as well as other environmental issues such as noise, water quality, air, and aesthetics.

3.2. Public Involvement

The Great Falls MPO conducts an ongoing public and stakeholder engagement process for all transportation planning activities, including development and approval of the transportation plan, TIP, and conformity determination. This process is conducted in accordance with the *Great Falls Planning Public Participation Plan*, which was last updated in December 2011. The *Public Participation Plan* is subject to periodic FHWA and FTA review and concurrence for consistency with Federal planning regulations. Such concurrence was most recently provided through TIP approval on September 1, 2017 by the TAC and PCC and September 12, 2017 by MDT. The *Great Falls Area LRTP – 2018 Update* provides a discussion on the outreach process conducted during plan development.

3.3. Latest Planning Assumptions and Emissions Model

The October 6, 1995 EPA policy memorandum for limited maintenance plans in non-classifiable CO nonattainment areas included a discussion of the applicability of the conformity rule requirements in these areas. The following section addresses the applicable requirements. According to this policy, a limited maintenance plan attainment area is not required to project emissions over the maintenance period because the air quality design value for the area is low enough that the stationary source permitting program, existing SIP controls, and Federal control measures provide adequate assurance of maintenance of the CO standard over the initial 10-year maintenance period.

In the October 6, 1995 policy memorandum, the EPA states: “The maintenance demonstration requirement is considered to be satisfied for nonclassifiable areas if the monitoring data show that the area is meeting the air quality criteria for limited maintenance areas (7.65 ppm or 85% of the CO NAAQS).” According to EPA’s July 8, 2002 Direct Final Rule, the CO design value for the Great Falls area was 4.5 ppm, which was below the limited maintenance requirement of 7.65 ppm. More recent data show lower levels of CO. The 2011 LMP Submittal states: “The current CO monitoring site in Great Falls, Overlook Park (#30-013-0001), has operated in the city park at the corner of 10th Avenue South and 2nd Street since mid-2001. Based on the data from 2008 and 2009, the latest design value is 1.6 ppm, which is well below the 8-hour NAAQS of 9 ppm and the CO LMP eligibility threshold of 7.65 ppm.”

EPA considers the maintenance demonstration requirement to be satisfied for areas that qualify for and use the LMP option. Based on its evaluation of the 2011 LMP Submittal and its subsequent approval in May 1, 2015, EPA concluded that because CO design values in the Great Falls area are consistently well below the LMP threshold, the State has adequately demonstrated the Great Falls area will maintain the

[3] Great Falls Unified Planning Work Program Federal Fiscal Year 2018, https://greatfallsmt.net/sites/default/files/fileattachments/planning_and_community_development/page/41061/upwp_ffy_2018_final.pdf, accessed January 2018.

NAAQS for CO into the future. By approving the alternative CO monitoring strategy for the Great Falls CO maintenance area, EPA recognizes the strategy is adequate to verify continued attainment of the NAAQS for CO in Great Falls.

Given this information, the Great Falls area adequately demonstrates maintenance.

3.4. Regional Emissions Analysis

As previously noted, the alternative CO monitoring method includes an annual review of traffic volumes using data from MDT permanent ATRs in Great Falls by the Montana DEQ to demonstrate ongoing compliance with the NAAQS for CO. Thresholds are defined based on the percent increase in consecutive, rolling 3-year ADT volumes and correlated to presumed changes in ambient CO concentrations.

40 CFR 93.109(e) indicates an area is not required to satisfy the regional emissions analysis for Sections 93.118 or 93.119 for a given pollutant and NAAQS, if the area has an adequate or approved LMP for such pollutant and NAAQS. The LMP must demonstrate that it would be unreasonable to expect that such an area would experience enough motor vehicle emissions growth for a NAAQS violation to occur. Consistent with the EPA's October 6, 1995 policy memorandum for LMPs and 40 CFR 93.109(e), the EPA's May 1, 2015 approval of the revised Great Falls Maintenance Plan affirms that no regional emissions analyses for future transportation CO conformity determinations are required for the CO LMP period.

For these reasons, no regional emissions analysis under Sections 93.118 or 93.119 of the conformity rule is required for plan conformity.

3.5. Timely Implementation of SIP Transportation Control Measures

Transportation Control Measures (TCM) are actions that are sometime included in a SIP to help reduce on-road mobile source emissions. TCMs are designed to reduce emissions from motor vehicles by reducing vehicle use, changing traffic flow, or changing congestion conditions. The currently-approved SIP for the Great Falls CO LMP area does not include any TCMs. Therefore, the TCM timely implementation requirement is not applicable to this conformity determination.

3.6. Fiscal Constraint

Metropolitan transportation plans are required to meet Federal fiscal constraint requirements as detailed in 23 CFR 450.322(b) (11). For nonattainment and maintenance areas such as Great Falls, this fiscal constraint requirement must be met before a conformity determination is approved. The *Great Falls Area LRTP – 2018 Update* documents that planned expenditures are consistent with existing and proposed funding sources that can reasonably be expected to be available for transportation uses. As such, the transportation plan meets the fiscal constraint requirement.

4.0 CONCLUSION

It is the conclusion of this determination that in addition to the satisfaction of the aforementioned conditions and requirements, the G*reat Falls Area Long Range Transportation Plan – 2018 Update* is found to be in conformance with the applicable provisions of section 176(c) of the Clean Air Act, 40 CFR 93 Subpart A, and the revised Great Falls CO Maintenance Plan element of the SIP for the State of Montana.