AIR QUALITY CONFORMITY

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On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 was signed into law. Designed to protect people and communities, the CAAA has had a major impact on the plans and programs of the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), as it requires substantial emission 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 LRTP, transportation improvement plan (TIP), or any revisions to its plan will not adversely affect air quality.[1] The conformity analysis and determination were developed based on the applicable federal, state, and local requirements; input from the MPO; 2020-2024 Billings Transportation Improvement Program Amendment II; and information presented in this section of the adopted 2023 Billings Urban Area LRTP.

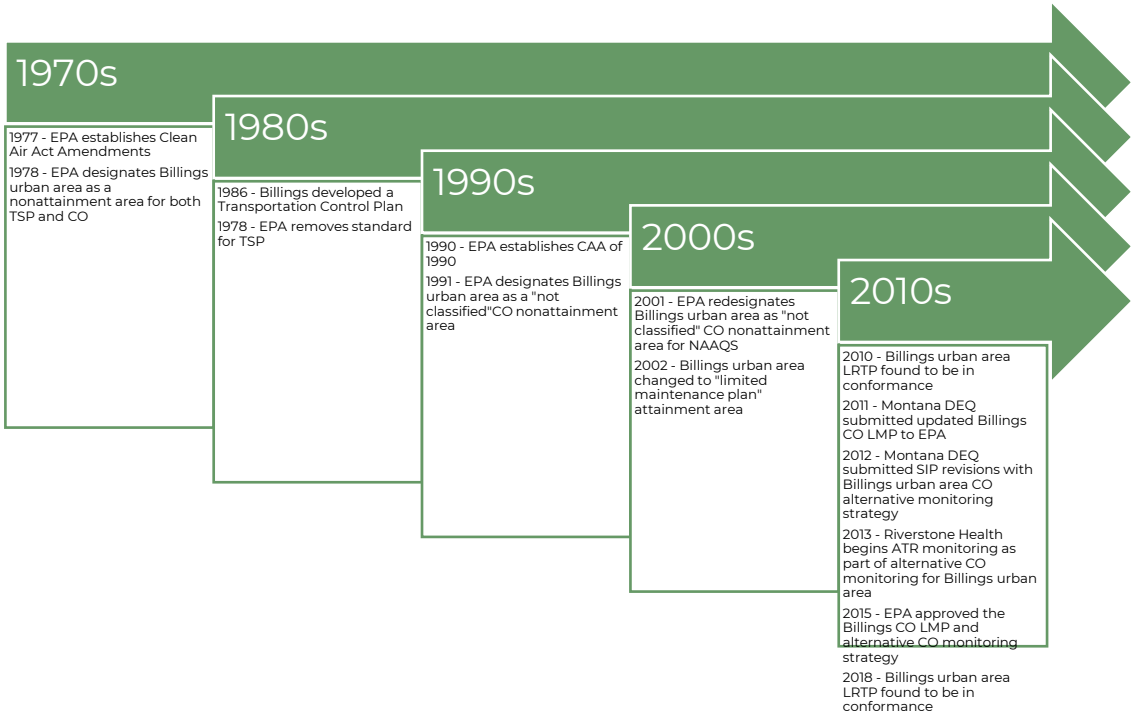
Background

TIMELINE

Over the last 40 years, several regulations have passed, and actions have occurred within the State of Montana and Billings area that have changed certain requirements for determining conformity of an LRTP. Exhibit 1 illustrates a timeline of the different regulations and actions for conformity.

[1] United States. (N.D.) *Code of Federal Regulations (40 CFR 93.102 (a)) – Title 40 – Protection of Environment, Chapter 1, Subchapter C, Part 93, Subpart A*. https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-93/subpart-A/section-93.102

Exhibit 1. Billings Planning Area Air Quality Conformity Timeline



DETAILS

Billings was designated as a nonattainment area by the Environmental Protection Agency (EPA) for both Total Suspended Particulates (TSP) and Carbon Monoxide (CO) in a Federal Register (FR) notice on March 3, 1978 (43 FR 8962) as a result of the Clean Air Act Amendments (CAAA) of 1977. The National Ambient Air Quality Standard (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. The CO violation was attributed primarily to motor vehicle emissions, and a transportation control plan (TCP) was developed to bring Billings back into compliance following the nonattainment designation. The initial CO TCP concentrated on an intersection reconstruction at Exposition Drive and 1st Avenue N. The final CO TCP incorporated computer modeling with the intersection reconstruction and was approved in the Federal Register on January 16, 1986 (51 FR 2397).

In 1987 the standard for TSP was dropped, and a new standard for particulate matter under 10 microns in size (PM - 10) was adopted (52 FR 24854). The EPA has also adopted the PM 2.5 standard and Billings is considered to be in compliance with both of these new standards. Billings was reevaluated in September 1990, based on the 1990 CAAA, as well as the lack of exceedances in the CO monitoring data for 1988 and 1989. On November 6, 1991, a Federal Register notice (56 FR 56799) listed Billings as a “not classified” nonattainment area for CO. The Montana Department of Environmental Quality (DEQ) developed this redesignation request with guidance from the 1990 CAAA and a September 4, 1992 EPA memo from John Calcagni to the EPA Regional Air Directors. Section 107(d)(3)(E) of the CAAA defines the five required criteria of a redesignation request, which include:

- Criterion 1: Attainment of the Applicable NAAQS
- Criterion 2: State Implementation Plan Approval
- Criterion 3: Permanent and Enforceable Improvements in Air Quality

- Criterion 4: Fulfillment of CAAA Section 110 and Part D Requirements
- Criterion 5: Fully Approved Maintenance Plan under CAAA Section 175A

Each of these criteria were accomplished and demonstrated in the CO redesignation request submitted in 2001. On February 9, 2001, the Governor of Montana submitted a request to redesignate the Billings "not classified" carbon monoxide (CO) nonattainment area to attainment for the CO NAAQS. The Governor also submitted a CO maintenance plan with this request. In this action, the EPA approved the Billings CO designation request and the 10-year maintenance plan effective on April 22, 2002. With this action, the Billings area legal designation was changed from "not classified" nonattainment for CO to a "limited maintenance plan" attainment area.

With the redesignation to attainment, the Billings area was required to comply with the provisions of the 2002 Carbon Monoxide Limited Maintenance Plan (2001 LMP Submittal) 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. The Billings area can request full attainment status if the Billings area does not have any further CO NAAQS violations during the maintenance period.

The Montana DEQ submitted an updated Billings 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 2002 LMP, and details strategies for maintaining CO standards for the subsequent ten years. As such, the 2011 LMP document fulfills the criteria established in 40 CFR Part 51, Appendix V.

- On June 22, 2012, the Montana DEQ submitted State Implementation Plan (SIP) revisions that included an alternative CO monitoring strategy due to the Billings area monitoring consistently low levels of CO for over a decade. The DEQ determined that using the resource-intensive CO analyzers to confirm CO levels was not justifiable. The alternative CO monitoring strategy includes the following:
- Reviewing the traffic volumes annually in each of the CO maintenance areas using the data from the MDT's permanent automatic traffic recorders (ATR) in Billings,
- Comparing the latest 3-year monthly average of the average daily traffic (ADT) volumes during the traditional CO concentration season of November through February against baseline 2008-2010 ADT average for those months, and
- Implementing a contingency plan, so that if the most recent, consecutive 3-year period ADT in the CO maintenance area increases by greater than 25% from the baseline 2008-2010 period (The contingency plan includes reinstituting the gaseous monitoring at the 2008-2010 monitoring location or at a site expected to read greater CO than that site.).[2]

On March 30, 2015, the EPA approved the submitted 2nd 10-year CO LMP, and its associated alternative CO monitoring method. The following conformity determination was made in accordance with the above referenced Federal regulations. The determination is for CO and applies to the 2023 Billings Urban Area LRTP and the Carbon Monoxide State Implementation Plan (SIP) for the State of Montana. As of the date of this conformity determination, the Billings urban area is not designated as a nonattainment or maintenance area for any other air pollutant.

[2] Montana Department of Environmental Quality. (June 2012). *State of Montana Alternative CO Monitoring Strategy – Billings and Great Falls CO Maintenance Areas.*

Conformity Determination

INTERAGENCY CONSULTATION

The consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17 Chapter 8 Subchapter 13) was used in the preparation of this conformity determination and emissions analysis. 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 MDT, Montana DEQ, and Yellowstone County Planning Board. The Montana DEQ and MDT coordinate regarding air quality and transportation conformity on behalf of MPOs such as the City of Billings-Yellowstone County MPO. Coordination is conducted in accordance with applicable Federal code (40 CFR 93) and state administrative rules (ARM Chapter 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 Billings urban area transportation planning process. As such, air quality has received specific attention during development of the numerous plans, programs, and projects over the last 30 years. The actions and activities of the 2023 Billings Urban Area LRTP and process closely parallel those of the SIP and support its intentions of achieving and maintaining the NAAQS.

PUBLIC & STAKEHOLDER INVOLVEMENT

The Billings-Yellowstone County MPO conducts ongoing public, stakeholder, and interagency outreach for all transportation planning activities in the Billings urban area. Guidance for the outreach is included in the Yellowstone County Planning Board Public Participation Plan, which was updated by the MPO and adopted by the PCC in September 2018. The plan is reviewed and updated periodically by the MPO. For this LRTP, a public involvement plan was established at the beginning of the project and used to guide the public, stakeholder, and interagency involvement. Chapter 3 of this LRTP summarizes the process and outreach activities incorporated for development of this plan.

PLANNING ASSUMPTIONS & REGIONAL EMISSIONS ANALYSIS

An October 6, 1995, EPA policy memorandum for LMPs in non-classifiable CO nonattainment areas included a discussion of the applicability of the conformity rule requirements in these areas. According to this policy, a LMP 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. The design value must continue to be at or below 7.65 ppm. The CO average design value for the Billings area is 5.5 ppm, which is well below the requirement. Therefore, the Billings area adequately demonstrates maintenance. Under a CO LMP, the following elements are applicable regarding the regional emissions analysis:

- No regional emissions analysis is required for applicable pollutants/precursors and analysis years.
- Transportation plan, TIP, and project conformity determinations are still required.
- For applicable projects, hot-spot analyses are still required.

The Transportation Improvement Program (TIP) is a required planning program for federally assisted highway and transit improvements for the Billings metropolitan planning area and the MDT over a five-year period. The TIP is prepared every five years and amended as needed, and is in conformance with 23

CFR, Part 450 324-330. Therefore, conformity demonstration using regional emissions analysis is not required for the LRTP.

In the most recent Montana Air Quality Monitoring Network Plan, the Montana DEQ Air Quality Bureau **lists no changes at either of the Ambient Air Quality Monitoring Network Locations in Billings** (Billings-Coburn and Billings-Lockwood).[3]

2012 LMP Alternative CO Monitoring Strategy

As identified in the 2012 LMP, an alternative CO monitoring strategy was identified that included monitoring traffic volumes annually in each of the CO maintenance areas using the data from the MDT's permanent automatic traffic recorders (ATR) in Billings. The ATR location is Site A-050 (US 87, Main Street, between Milton and Hansen) in Billings, displayed in Figure 1.[4] Table 1 summarizes the rolling three year monthly average daily traffic (ADT) comparison between the 2008-2010 base year (shaded in light blue), the previous LRTP 2015-2017 year time-period, and the most recent time-period (bolded).

Table 1. Rolling Three Year Monthly Average Daily Traffic (ADT) Comparison

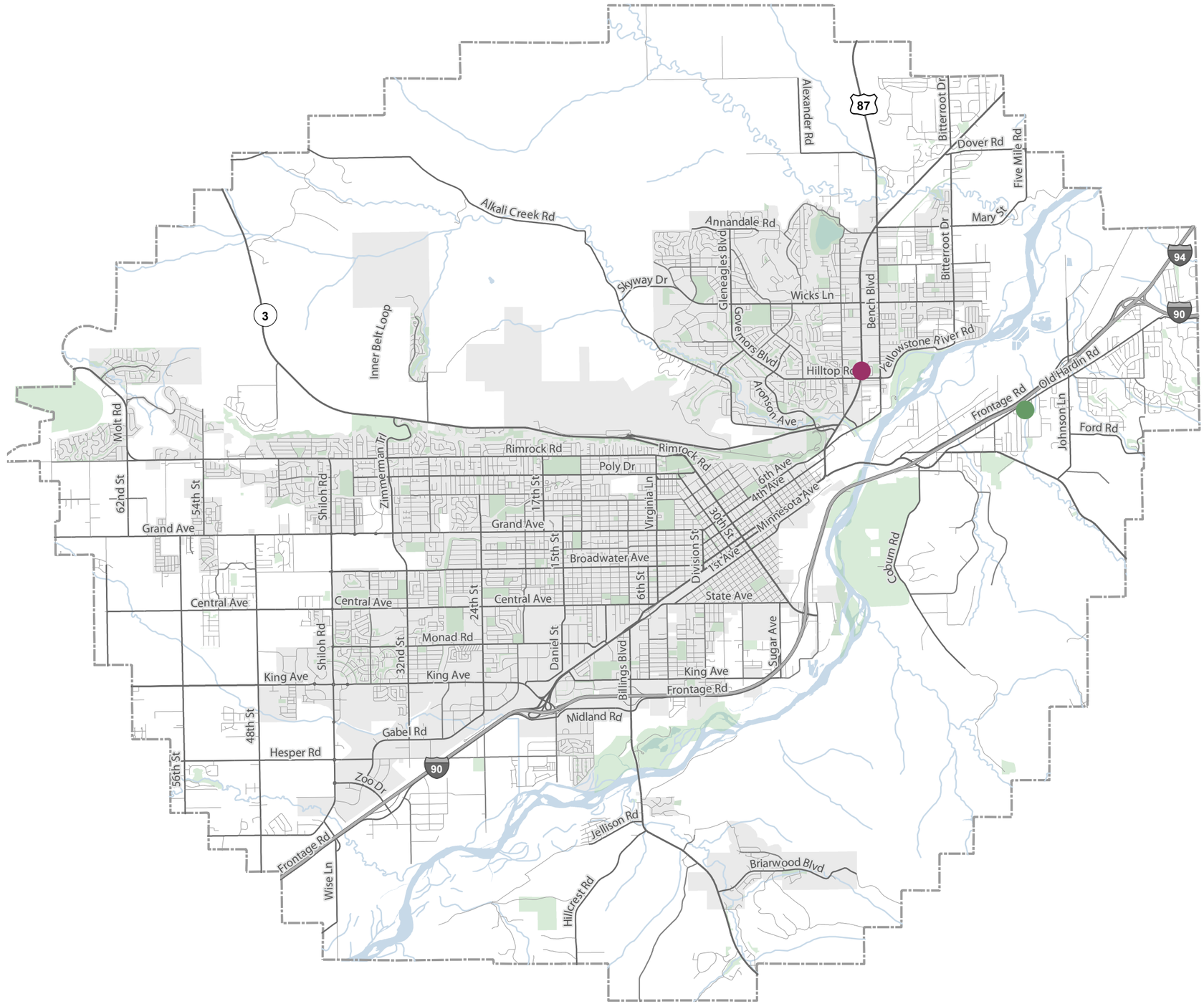
Year	Monthly Average November – February Annual Daily Traffic	Percent Change (%)
2008 – 2010	33,952	-
2011 – 2013	31,287	-8.8%
2015 – 2017	29,522	-13.0%
2020 – 2022	**27,906**	**-19.5%**

Source: Montana Department of Transportation, Riverstone Health

As shown in Table 1, the most recent rolling three-year monthly ADT for the most recent reporting period is **19.5 percent lower than the baseline ADT**. Therefore, the alternative CO monitoring strategy meets the requirements and is in conformance with the 2012 LMP.

[3] Montana Department of Environmental Quality. (June 2021). *Air Quality Monitoring Network Plan*. https://deq.mt.gov/files/Air/AirMonitoring/Documents/2021_ANMP.pdf
[4] Montana Department of Environmental Quality. (2014). State of Montana Alternative CO Monitoring Strategy Methodology.

AIR QUALITY MONITORING



- Air Quality Monitoring Station
- Automated Traffic Recorder

Data Source: Montana Department of Environmental Quality, Montana Department of Transportation

FISCAL CONSTRAINT

Metropolitan transportation plans are required to meet Federal fiscal constraint requirements as detailed in 23 CFR450.322(b). For LMP areas such as Billings, this fiscal constraint requirement must be met before a conformity determination is approved. Chapter 8 of this LRTP 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 LRTP meets that fiscal constraint requirement.

Conclusion

In addition to the above conditions and requirements, it is concluded that the 2023 Billings Urban Area Long Range Transportation Plan 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 Billings Carbon Monoxide Limited Maintenance Plan element of State Implementation Plan for the State of Montana.