

Revised Carbon Monoxide Maintenance Plan for the Colorado Springs Attainment/Maintenance Area



2nd Revision to the Maintenance Plan Adopted by:

*The Colorado Air Quality Control Commission, December 18, 2003
The Pikes Peak Area Council of Governments, September 10, 2003*

1st Revision to the Maintenance Plan Approved by:

The U.S. Environmental Protection Agency, December 22, 2000

Original Redesignation Request and Maintenance Plan approved by:

The U.S. Environmental Protection Agency, August 25, 1999



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1. Background

The Environmental Protection Agency (EPA) approved a carbon monoxide (CO) redesignation request and maintenance plan for the Colorado Springs area on August 25, 1999 (64 FR 46279), which became effective on October 29, 1999. The action, which was adopted by the Colorado Air Quality Control Commission (AQCC) in January 1998, established an attainment year of 1993 and a maintenance year of 2010, provided for the continuation of the State's basic inspection and maintenance (I/M) program and the oxygenated gasoline program in the Colorado Springs area (as the programs existed in January 1998), established a carbon monoxide emission budget of 212 tons per day for mobile sources (to be utilized in transportation conformity determinations), and established a contingency plan in the event a violation of the carbon monoxide National Ambient Air Quality Standards (NAAQS) was measured.

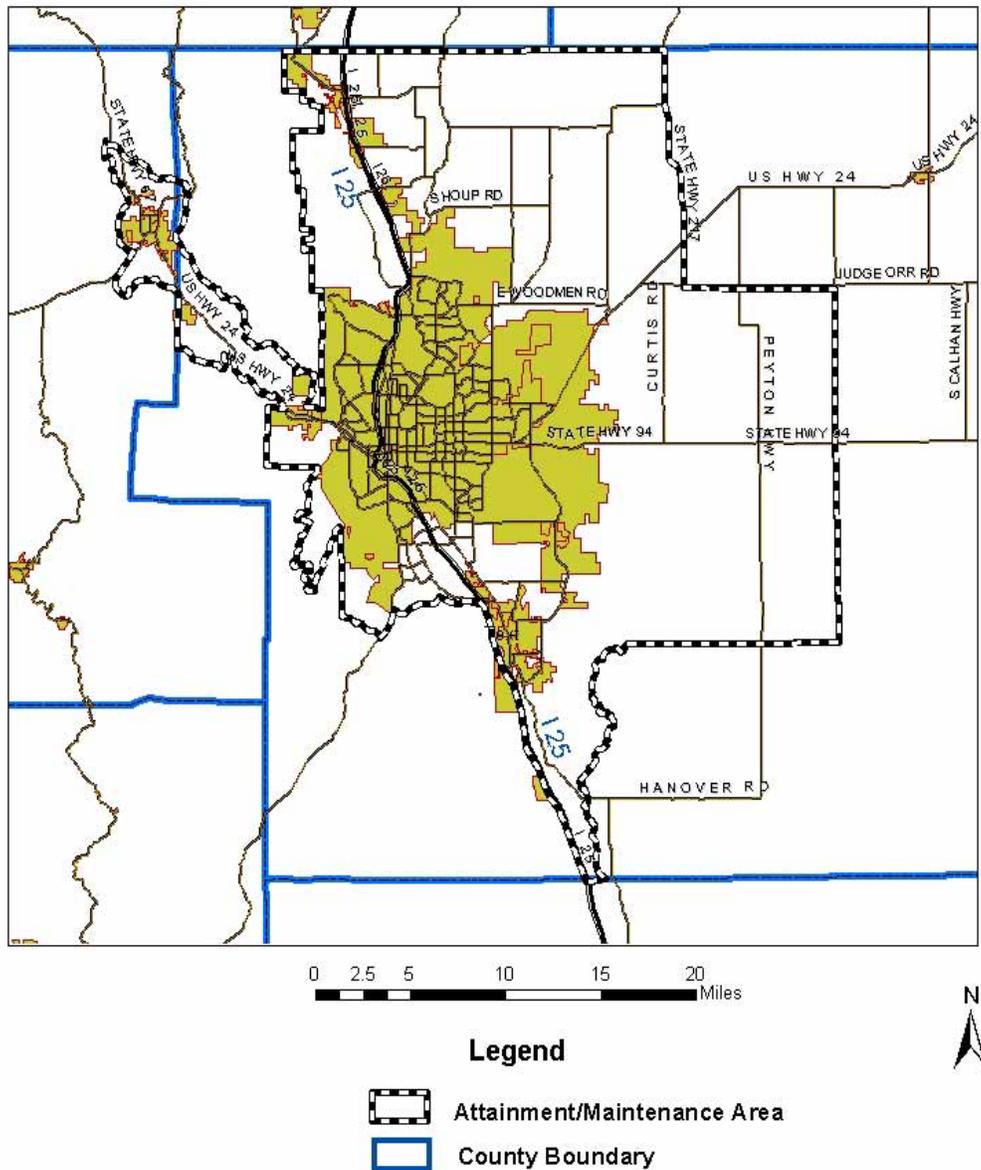
On December 22, 2000, the EPA approved a revised Colorado Springs area CO maintenance plan, which became effective on February 20, 2001 (65 FR 80779). This action, which was adopted by the AQCC in February 2000, revised the attainment year from 1993 to 1990, provided for the continuation of the basic I/M program, eliminated the oxygenated gasoline program in El Paso County, revised the 1990 and 2010 emission inventories and the 2010 maintenance demonstration, revised the CO emission budget from 212 to 270 tons per day, and revised the contingency plan.

This revision to the maintenance plan updates the emissions inventories using the latest EPA-approved tools (including the MOBILE6.2 on-road mobile sources emissions model), eliminates the basic I/M program in El Paso County from the federal State Implementation Plan (SIP), extends the maintenance year through 2015, and revises the CO emission budget from 270 to 531 tons per day for the period 2010 and beyond.

2. Emission Inventories and Maintenance Demonstration

The area shown in Figure 1 below represents the area in which the Pikes Peak Area Council of Governments (PPACG) serves as the "Metropolitan Planning Organization" (MPO) for transportation and the "Lead Planning Agency" for air quality.

Figure 1. Colorado Springs Carbon Monoxide Attainment/Maintenance Area



Map Created by the APCD Technical Services Program
Colorado Department of Public Health and Environment

The emission inventories for the 1990 attainment year, the 2005, 2007 and 2010 interim years, and the 2015 maintenance year are presented in Table 1. Emissions for all future years are less than emissions for the 1990 attainment year and, therefore, maintenance of the CO NAAQS is demonstrated for all future years.

The inventories provide emissions estimates for a weekday during the winter CO season (November through February). The modeling domain consists of the Colorado Springs attainment/maintenance area, which encompasses the City of Colorado Springs and surrounding communities. The inventories were developed using EPA-approved emissions modeling methods, including the MOBILE6.2 emissions model, the latest transportation data from the 2025 long-range plan, and demographic data approved by the PPACG in September 2000. The technical support document for this maintenance plan contains detailed information on model assumptions and parameters for each source category corresponding to each inventory year.

**Table 1 - Colorado Springs Carbon Monoxide Maintenance Plan
Emission Inventories (tons/day)**

Source Category	1990	2005	2007	2010	2015
Aircraft	1.88	2.22	2.26	2.33	2.46
Heating	1.35	1.17	1.15	1.20	1.29
Commercial Non-road	10.71	19.58	20.76	22.56	25.53
Construction Non-road	2.86	2.83	2.83	2.82	2.85
Industrial Non-road	5.49	5.61	5.75	5.72	5.67
Lawn and Garden	7.78	10.63	11.01	11.62	12.67
Agriculture Non-road	0.02	0.02	0.02	0.02	0.02
Wood Burning	45.77	34.96	33.52	33.17	34.01
Structure Fires	0.27	0.13	0.11	0.11	0.12
Railroad Non-road	0.03	0.04	0.04	0.04	0.04
Railroad Locomotives	0.09	0.17	0.18	0.18	0.19
Point Sources	2.83	3.28	3.34	3.84	4.32
Sub-total non-road	79.06	80.73	80.95	83.61	89.15
On-Road	542.27	417.66	389.68	350.21	320.20
Grand Total (tons/day)	621.33	498.39	470.63	433.82	409.35

Notes: The 1990 on-road emissions include the impacts of an idle I/M program and an oxygenated fuels program; 2005-2015 on-road emissions do not. Results are reported with two decimal place precision to provide representation of smaller source categories. This level of precision is not intended to suggest a level of accuracy.

3. Control Measures to be Removed for the Maintenance Period

As of January 1, 2005, the basic I/M program will not be part of the federally enforceable SIP for the Colorado Springs attainment/maintenance area. No future emission reduction credit has been taken in the maintenance demonstration for this or any other current State or local control programs. The oxygenated gasoline program was removed from State regulation and the federal SIP in the previous revision to the maintenance plan approved by EPA on December 22, 2000.

The federally enforceable basic I/M program included in the SIP for this area through December 31, 2004 does not include on-board diagnostics (OBD) testing because modeling demonstrates that maintenance of the NAAQS can be achieved without it. For the period beginning January 1, 2005, maintenance is achieved for the remainder of the maintenance period without an I/M program.

Although the basic I/M program is being removed from the SIP by December 31, 2004, the AQCC and the Air Pollution Control Division (APCD) commit to implementing an I/M program in the Colorado Springs attainment/maintenance area by January 1, 2026 to help assure the conformity determination for 2026 and thereafter (see Section 5. for an explanation of the conformity process). The I/M program shall include any federally required on-board diagnostic tests.

4. Enforceable Control Measures for the Maintenance Period

- AQCC Regulation No. 11, Inspection/Maintenance, through 12/31/04
- Federal Motor Vehicle Emissions Control tailpipe standards and regulations, including those for small engines and non-road mobile sources. Credit is taken for these federal requirements, but they are part of a federally administered program and not a state commitment of the Colorado SIP.
- AQCC Regulation No. 3, Air Contaminant Emission Notice
- AQCC Regulation No. 4, Wood Stove Standards
- AQCC Regulation Number 6, Standards of Performance for New Stationary Sources
- AQCC Common Provisions Rule

The Common Provisions and Regulation No. 6 delineate industrial source control programs. The Common Provisions, and Parts A and B of Regulation No. 3, are already included in the approved Colorado SIP. Regulation No. 6 and Part C of Regulation No. 3 implement the federal standards of performance for new stationary sources and the federal operating permit program. The revised Colorado Springs maintenance plan makes no changes to these regulations.

5. Transportation Conformity and Mobile Source Carbon Monoxide Emission Budget

The transportation conformity provisions of Section 176(c)(2)(A) of the CAA require regional transportation plans and programs to show that emissions expected from implementation of plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable state implementation plan. The establishment of a mobile source emission budget in this maintenance plan assures that transportation plans and programs and their resulting emissions will conform with the emission projections and the demonstration of long-term maintenance of the CO NAAQS documented in this maintenance plan.

The Colorado Springs attainment/maintenance area mobile source emission budget is **531 tons/day for 2010 and beyond**. This budget was derived by taking the difference between the base year (1990) total emissions and the 2010 and 2015 total emissions, and then subtracting one ton. (One ton is subtracted because the safety margin plus the 2010 or 2015 total emissions cannot equal the 1990 emissions.) This difference is the “safety margin”, and the safety margin is added to future year mobile sources emissions to determine the budget. The lower of the two numbers was selected as the budget for 2010 and beyond. The 531 tons per day budget replaces the prior EPA-approved budget of 270 tons per day, which applied for the period 2001 and beyond.

2010-2014 $621.33 - 433.82 = 187.51$ tons
calculation: $187.51 - 1 = 186.51$ tons (safety margin)
 $186.51 + 350.21 = 536.72$ or **536 tons/day**

2015 and $621.33 - 409.35 = 211.98$ tons
beyond $211.98 - 1 = 210.98$ tons (safety margin)
calculation: $210.98 + 320.20 = 531.18$ or **531 tons/day**

Typically, emission budgets are the level of mobile source emissions in future years. For the Colorado Springs area, the budget could have been 350.21 tons per year for 2010-2014 and 320.20 tons per year for 2015 and beyond. The PPACG has elected to add the margin of safety to the budget in order to maximize the flexibility for determining conformity in future years due to mobile source growth beyond projected levels for future years or for model changes that revise projected emissions.

6. Monitoring Network / Verification of Continued Attainment

The APCD will continue to operate an appropriate air quality monitoring network in accordance with 40 CFR Part 58 to verify the continued attainment of the CO NAAQS. If measured mobile source parameters (e.g., vehicle miles traveled, congestion, fleet mix, etc.) change significantly over time from what is presented in the technical support document, the APCD will perform the appropriate studies to determine whether additional and/or re-sited monitors are necessary. Annual review of the NAMS/SLAMS air quality surveillance system will be conducted in accordance with 40 CFR 58.20(d) to determine whether additional and/or re-sited monitors are necessary. Annual review of the NAMS/SLAMS air quality surveillance system will be conducted in accordance with 40 CFR 58.20(d) to determine whether the system continues to meet the monitoring objectives presented in Appendix D of 40 CFR Part 58.

7. Contingency Plan

Section 175A(d) of the CAA requires that the maintenance plan contain contingency provisions to assure that the State will promptly correct any violation of the CO NAAQS which occurs in the Colorado Springs attainment/maintenance area.

The contingency plan must ensure that the contingency measures are adopted expeditiously once the need is triggered. The primary elements of the contingency plan involve the tracking and triggering mechanisms to determine when contingency measures are needed and a process for implementing appropriate control measures.

A. Tracking

The tracking plan for the Colorado Springs area consists of continuous carbon monoxide monitoring and analysis of CO concentrations by the APCD. The APCD will notify the EPA, the AQCC, the PPACG and local governments of any exceedance of the CO standard within 30 days of occurrence. The ongoing regional transportation planning process carried out by the PPACG in coordination with the Colorado Department of Transportation (CDOT), the APCD, the AQCC, and the EPA, will serve as another means of tracking mobile source CO emissions into the future. Since regular revisions to the regions' transportation plans and programs must go through a transportation conformity determination, a process is in place to periodically review the vehicle miles traveled (VMT) and mobile source emissions of CO presented in this maintenance plan.

B. Triggering and Response

Triggering of the contingency plan does not automatically require a revision of the SIP, nor is the area necessarily redesignated once again to nonattainment. Instead, the State will normally have an appropriate time-frame to correct a violation by implementing one or more adopted contingency measures. In the event that violations continue to occur after contingency measures have been implemented, additional contingency measures will be implemented until the violations are corrected.

An exceedance of the CO NAAQS may trigger a voluntary, local process by the PPACG and APCD to identify and evaluate potential contingency measures. However, the only federally enforceable trigger for mandatory implementation of contingency measures shall be a violation of the CO NAAQS.

The State will move forward with mandatory implementation of contingency measures under the SIP if a violation of the CO NAAQS occurs. No more than 60 days after being notified by the APCD that a violation occurred, the PPACG, in conjunction with the APCD, the AQCC and local governments, will initiate a subcommittee process to begin evaluating potential contingency measures. The subcommittee will present recommendations within 120 days of notification, and the recommended contingency measures will be presented to the AQCC within 180 days of notification.

The AQCC will then hold a public hearing to consider the recommended contingency measures, along with any other contingency measures the AQCC believes may be appropriate to effectively address the violation. The necessary contingency measures will be adopted and implemented within one year after a violation occurs.

C. List of Potential Contingency Measures

The PPACG and the APCD may choose one or more of the following measures to recommend to the AQCC for consideration. The measures are designed to bring the area quickly back into compliance with the CO NAAQS.

- A basic vehicle inspection and maintenance program as set forth in AQCC Regulation No. 11, prior to modifications made as of December 18, 2003, with the addition of any on-board diagnostics components required by federal law.
- A 2.7% oxygenated gasoline program as set forth in AQCC Regulation No. 13, prior to modifications made as of February 17, 2000.

In addition to these potential contingency measures, the State may evaluate other potential strategies, including but not limited to, nonattainment New Source Review permitting requirements, enhanced I/M, transportation control measures and mandatory wood burning restrictions, in order to address any future violations in the most appropriate and effective manner possible.

8. Subsequent Maintenance Plan Revisions

It is required that a maintenance plan revision be submitted to EPA eight years after the original redesignation request/maintenance plan is approved. The purpose of this revision is to provide for maintenance of the NAAQS for an additional ten years following the first ten-year period. The State of Colorado commits to submit a revised maintenance plan eight years after redesignation to attainment (year 2007), as required by the CAA and EPA.