Revised PM10 Maintenance Plan for the

Aspen Attainment/Maintenance Area

Colorado Department
of Public Health
and Environment

10-year Revision:
December 16, 2010

Original Redesignation Request and Maintenance Plan adopted by:

- The U.S. Environmental Protection Agency, May 15, 2003 (effective July 14, 2003)
- Colorado Air Quality Control Commission, January 11, 2001

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SECTION 1: INTRODUCTION

This document is the second revision of the PM10 Maintenance Plan for the Aspen Attainment/Maintenance Area. The U.S. Environmental Protection Agency (EPA) first approved a PM10 redesignation request and maintenance plan for the Aspen area on May 15, 2003 (68 FR 26212), which became effective on July 14, 2003. The redesignation request and maintenance plan was adopted by the Colorado Air Quality Control Commission on January 11, 2001.

This second maintenance plan, as revised in 2010, supersedes and replaces the first maintenance plan adopted by the commission in 2001. The 2010 plan includes updated emissions inventories and projections using the latest EPA-approved tools. This plan also revises the PM10 mobile source emissions budget from 16,244 pounds per day in 2015 to 1,146 pounds per day in 2023 and beyond.

The City of Aspen, Pitkin County, and the State of Colorado request continuation of "attainment/maintenance" status for the Aspen PM10 Attainment/Maintenance Area. The Aspen area originally was designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of ten microns or less (PM10) in 1990. The area presently is demonstrating attainment with the PM10 NAAQS. The Maintenance Plan section of this document has been updated and will demonstrate that the area will be able to maintain compliance with the NAAQS through the year 2023. The benefits of maintaining attainment/maintenance status include:

1. Areas that maintain attainment/maintenance status no longer carry the stigma associated with nonattainment of the NAAQS.
2. Attainment areas will not become "serious" nonattainment areas even if a violation of the NAAQS occurs in the future. This means that specific control measures can be applied to address a violation without going through a rigorous federal process, where serious areas must implement mandatory control measures and be subject to numerous administrative activities.
3. Prevention of Significant Deterioration (PSD) permitting requirements replace New Source Review (NSR) permitting requirements for new and modified major stationary sources. These permitting requirements are important for large industrial facilities that currently are not located, nor likely to locate, in the Aspen area.

This plan is designed to document and ensure continuing attainment and maintenance of the NAAQS for PM10 in the Aspen area. This document is intended to comply with requirements of the federal Clean Air Act (CAA), and with relevant procedures and policies of the U.S. Environmental Protection Agency (EPA).

A. BACKGROUND

1. PM10 National Ambient Air Quality Standard (NAAQS)

In 1971, the EPA set NAAQS for several air pollutants, including total suspended particulates (TSP), defined as particles with an aerodynamic diameter of less than 40 microns. In 1987, the EPA changed the TSP standards by setting NAAQS for PM10, defined as particles with an aerodynamic diameter of ten microns or less (PM10). The current PM10 NAAQS allow for a maximum 24-hour average of 150 ug/m3. The 24-hour PM10 NAAQS may not be exceeded more than once per year on average over any three year period.

There are both primary and secondary air quality standards. The primary standards are set to protect human health with a margin of safety to protect the more sensitive persons in the population like the very young, elderly and the ill. Secondary standards are set to protect property, materials, aesthetic values and general welfare. For PM10, the national primary and secondary standards are the same. The numerical levels of the standards are subject to change, based on new scientific evidence summarized in air quality criteria documents. In 2006, the EPA revoked the annual PM10 standard but retained the 24-hour average of 150 ug/m3 (71 FR 61144) for both the primary and secondary NAAQS.

In general, demonstrating attainment requires collecting representative air monitoring data and using approved measuring instruments and procedures, with adequate quality assurance and quality control. Air quality measurements in the Aspen area satisfy this requirement, as shown in Section 2 (Table 1 – Aspen PM10 Monitoring Record).

2. Health and Welfare Effects of PM10

Particulate matter is the term given to tiny particles of solid or semi-solid material suspended in the atmosphere. PM10 refers to a subset of particulate matter 10 micrometers in diameter and smaller. PM10 is inhalable. In the Aspen area, PM10 is created primarily from re-entrained road dust, carbon black (from automobile and diesel engines) and soot (from fireplaces and woodstoves). PM10 from these combustion sources contains a large percentage of elemental and organic carbon, which contributes to atmospheric haze and to health problems.

Epidemiological studies and laboratory studies of humans and animals indicate that particulate matter can be inhaled deeply into the respiratory system, resulting in aggravation of existing respiratory and heart diseases, damage to lung tissue, impairment of breathing and respiratory functions, alterations to the body's physical and immune system defenses, and even premature death. Many particles also are composed of compounds that are known or suspected human carcinogens. People most sensitive to particulate matter are the elderly, children, and those with chronic lung disease, cardiovascular disease, influenza, and asthma.

The welfare effects of particulate air pollution are widespread. Because of the potential for extremely long-range transport of particles, it is thought that no place on Earth is

free of particulate pollution generated by urban and rural sources. Chemical and photochemical reactions involving the particles may occur in the air, or once they have been deposited on environmental media or structures. Such soiling and acid deposition cause visibility degradation, climate changes, and damage to crops, natural vegetation, water bodies, and aquatic life. In addition, sculpture and architecture may be damaged or destroyed by particulate soiling and acid deposition--both of which have been detected in the most remote areas of the world.

3. Aspen Nonattainment Area Classification History

Because of observed problems with air particles, monitoring of total suspended particulates (TSP) began in 1975, and continued through 1987. In 1987, based on relatively high TSP levels, the Aspen area was designated as a "Group I" area for PM10. The Aspen area was then designated a "moderate" nonattainment area in 1990 pursuant to section 107(d)(4)(B) of the Clean Air Act.

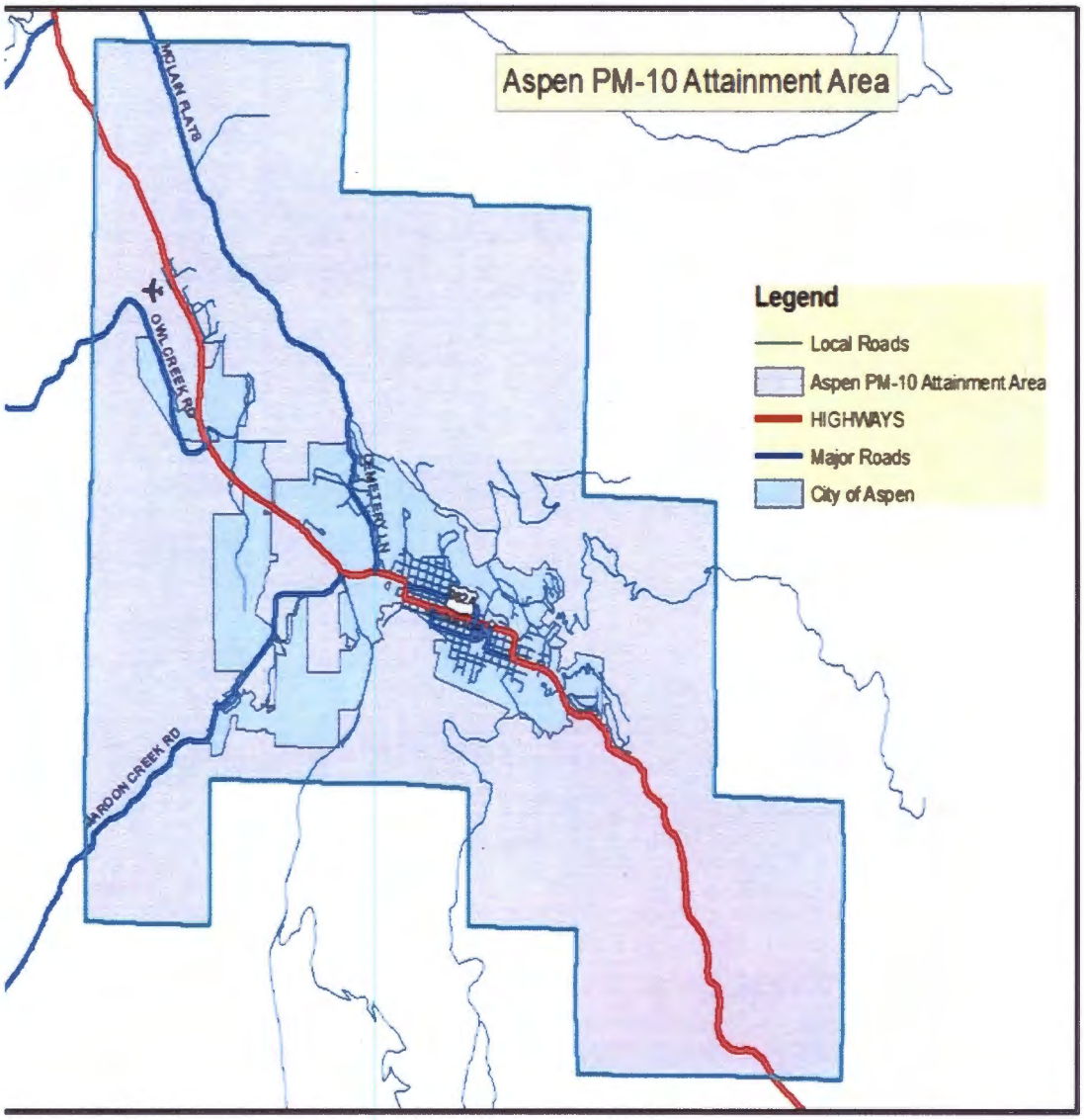
4. Aspen Attainment/Maintenance Area Boundary

The boundary for the Aspen PM10 Attainment/Maintenance Area is defined as follows:

The area encompassed by the following Parcel I.D. numbers, as defined by the Pitkin County Planning Department: 2737-29, 2737-28, 2737-21, 2737-20, 2737-19, 2737-18, 2737-17, 2737-08, 2737-07, 2737-06, 2735-22, 2735-15, 2735-14, 2735-13, 2735-12, 2735-11, 2735-10, 2735-03, 2735-02, 2735-01, 2641-31, 2643-36, 2643-35, 2643-34, 2643-27, 2643-26

This area essentially includes the City of Aspen and a surrounding area in Pitkin County. A map illustrating the area boundary is shown in Figure 1.

Figure 1: Map of the Aspen Attainment/Maintenance Area



B. ORGANIZATIONS INVOLVED IN PREPARING/APPROVING PLAN

Preparation of this revised maintenance plan was a cooperative effort of the City of Aspen, Pitkin County, and the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment. The EPA, through its regional office in Denver, provided policy advice and technical assistance, and is responsible for final approval of this revised maintenance plan.

SECTION 2: PM10 ATTAINMENT HISTORY

A. MONITORING HISTORY

Monitoring for total suspended particulates (TSP) in Aspen began in 1975. Historic TSP levels were the basis for Aspen being designated as a "Group I" area for the new PM10 standards promulgated by the EPA in 1987. Group I locations were those areas estimated to have a greater than 95 percent probability of exceeding the new PM10 standards.

Table 1 lists the yearly maximum, yearly estimated exceedances and the 3-year average estimated exceedances for the Aspen monitoring site(s) for the 10-year period from 1998 through 2008. The State of Colorado maintained a monitor at 420 Main Street beginning in 1992. That monitor was shut down on April 30, 2002. The State of Colorado subsequently commenced monitoring at 120 Mill Street on May 1, 2003. Pitkin County has maintained a monitor since 1998, first at 420 Main Street and then 120 Mill Street (beginning May 22, 2002).

Table 1: Aspen PM10 Monitoring Record

Year	Maximum Concentration (ug/m^3)	Yearly Estimated Exceedances	3-yr Average Estimated Exceedances
1998	68*	0	0
1999	54*	0	0
2000	54*	0	0
2001	66*	0	0
2002	90*	0	0
2003	57+	0	0
2004	65+	0	0
2005	51+	0	0
2006	57+	0	0
2007	79+	0	0
2008	65+	0	0

* = 420 Main Street Monitoring Site + = 120 Mill Street Monitoring Site

B. DESIGN VALUE DETERMINATION

The "design value" is the critical air quality value upon which the maintenance plan is based. The design value, and the conditions that occurred on the day which it was measured, are utilized to develop emission inventories and serve as a baseline for

modeling ambient concentrations into the future. The selection of the design value used in this revised maintenance plan utilized the EPA's table look-up method from the EPA's "PM10 SIP Development Guideline" document. Based on the number of samples collected during the 2006 - 2008 period (323), the highest concentration is the design value, according to this guidance. The three highest concentrations measured during the period 2006 -2008 are as follows:

79 ug/m3 – March 13, 2007

65 ug/m3 – April 15, 2008

57 ug/m3 – March 6, 2006

Consequently, the design value used for this revised maintenance plan is 79 ug/m3.

SECTION 3: STATE IMPLEMENTATION PLAN APPROVAL

The following presents a brief summary of the development and the approval of the Aspen PM10 Nonattainment State Implementation Plan (SIP) Element.

A. 1988 SIP ELEMENT

The first Aspen SIP Element was adopted by the Colorado Air Quality Control Commission (AQCC) in July 1988, and the emission controls consisted of woodburning stove and fireplace restrictions, as well as street sweeping and sanding requirements. EPA Region 8 intended to approve the SIP Element, though it eventually was rejected once the Clean Air Act was amended in 1990 and new, more stringent requirements were in place.

B. 1991 SIP ELEMENT

A new Aspen10 SIP Element was adopted by the AQCC in November 1991. The control measures included local woodburning device restrictions, and requirements to reduce silt loading on paved roads through street cleaning and other appropriate means. Additional technical information was included in this Element. This plan was not submitted to the EPA due to enforceability issues surrounding the control measures.

C. 1993 SIP ELEMENTS

A revised Aspen SIP Element was adopted by the AQCC in January 1993. The enforceability issues were resolved by incorporating all control measures into state regulation. The control measures included: 1) local woodburning and restaurant grill device restrictions, 2) specifications for street sanding materials, 3) street sweeping requirements, 4) a voluntary woodburning curtailment program, 5) mass transit service expansion and the operation of a cross-town shuttle service, 6) commercial core paid parking and resident-only parking in outlying areas, and 7) a voluntary no-drive program. Additional technical information was included in this Element. The SIP Element again was revised by the AQCC in November 1993 when additional control measures were added, including 1) the establishment of park and ride spaces down-valley of Aspen for carpoolers and bus riders, 2) the establishment of an intercept parking lot at the edge of Aspen, 3) the operation of a shuttle connecting the intercept lot with central Aspen, 4) the creation of a bus-priority lane in Aspen, 5) additional street sweeping requirements, and 6) strategies to reduce driving and maximize street sweeping during the President's Day holiday period. The EPA approved these SIP Elements on September 14, 1994 (59 FR 47089). This approval did not include the voluntary no-drive day program, and further technical information was added.

D. 1994 SIP ELEMENT REVISION

The final revisions to the Aspen SIP Element were adopted by the AQCC in September 1994. The revisions consisted of further updating the technical and administrative information, adopting emission budgets for the Aspen area, and removing the voluntary no-drive program from consideration as part of the federal SIP. The EPA approved this revision on December 17, 1997 (62 FR 66007).

E. PM10 MAINTENANCE PLAN

The Colorado Air Quality Control Commission approved the PM10 Maintenance Plan on January 11, 2001. The EPA subsequently approved the plan on May 15, 2003, which became effective on July 14, 2003.

SECTION 4: PERMANENT AND ENFORCEABLE IMPROVEMENT IN AIR QUALITY

The State of Colorado must demonstrate, based on Section 107(d)(3)(E) of the Clean Air Act, that the improvement in air quality leading to attainment and continued compliance with the NAAQS is based on permanent and enforceable measures, and that the reductions are not the result of temporary reductions in emissions or unusually favorable meteorology.

A. OVERVIEW

It is reasonable to attribute the continued attainment of the PM10 NAAQS in the Aspen Attainment/Maintenance Area to emission reductions that are permanent and enforceable. These emission reductions are the result of local, state, and federal actions, not economic factors or unusual meteorology.

Economic conditions are not responsible for improved ambient levels in the Aspen Attainment/Maintenance Area. It is assumed that growth in population and sales tax revenue are indicators of increased activities that cause increased PM10 emissions and the potential for elevated PM10 concentrations. Information obtained for the City of Aspen shows that, during the period 2001 through 2008, sales tax revenues increased by 29.63 percent, while Pitkin County population increased by 3.8 percent over the same period. During this period, attainment of the PM10 NAAQS was demonstrated with no exceedances recorded.

Favorable meteorology also is an unlikely reason. Although winter and spring meteorological conditions are highly variable in mountain settings, there is no evidence to suggest that meteorological conditions experienced in the 2000s have not been "typical" (though it is difficult to make concrete conclusions based on short-term meteorological records). Because there has not been a violation of the PM10 NAAQS in Aspen since 1991, the Air Pollution Control Division concludes that the good air quality in the Aspen area is the result of the implementation of emission reduction measures, not meteorological fluctuations.

B. CONTROL MEASURES

The following control measures resulted in the area's attainment of the PM10 NAAQS, and these measures should ensure continued maintenance of the PM10 NAAQS through the year 2023, which is the duration of the maintenance period.

1. Woodburning and Restaurant Emission Controls

The City of Aspen and Pitkin County have adopted local ordinances that limit the number of woodburning devices in new construction in the Aspen area. The City of Aspen also has adopted an ordinance that requires emission controls for new restaurant grills. These measures were adopted locally in the late 1980s and early 1990s, and were included in state regulation in 1993 [Section III.C.4. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements)"]. The rule was approved by the EPA in 1994 and will remain part of state regulation and the federal SIP. This plan allows for revisions to the ordinances to allow greater use of natural gas devices. The use of such devices will not increase primary PM10 emissions. This will accommodate possible revisions to Pitkin County's ordinance, which presently limits the number of natural gas fireplaces to two in new construction

2. Street Sanding Controls

There is a requirement that any user that applies street sanding materials in the Aspen Attainment/Maintenance Area must use materials containing less than one percent fines with a durability index of less than 30 percent. This strategy was adopted in 1993 and approved by the EPA in 1994, and is defined in detail in Section III.C.1. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements)". The requirements will remain part of state regulation and the federal SIP.

3. Street Sweeping Requirements

There are street sweeping requirements for users that use street sanding materials on defined roadways in the Aspen area. Street cleaning using broom sweepers or any other sweepers with equal efficiency must be performed within four days of the roadways becoming free and clear of snow and ice following each sanding deployment use. These requirements are defined in detail in Section III.C.2. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements)".

4. Paid Parking Requirements

Parking on public streets within the City of Aspen's commercial core and surrounding residential areas is restricted through parking fees and permits to reduce traffic and encourage transit ridership. These requirements were adopted in 1993 and approved by the EPA in 1994 and will remain part of state regulation and the federal SIP. This is defined in detail in Section III.C.3. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements)".

5. Transit and Other Measures

Transit measures – the expansion of the bus fleet by 14 buses, the establishment of 400 Park 'n Ride lot spaces and a 250 space intercept parking lot, intercept lot and cross-town shuttle services, and a bus-priority lane (which was removed from service shortly after implementation because of the severe traffic congestion that resulted from converting a driving lane into the bus lane) - were adopted in 1993 and approved by the EPA in 1994. However, these measures were removed from state regulation and the federal SIP through the initial redesignation.

Other control measures also were eliminated from state regulation and the federal SIP through the initial redesignation. A voluntary no-drive provision was adopted by the state in 1993 but never approved by the EPA as part of the SIP. A voluntary woodburning curtailment program also was adopted by the state in 1993. These two programs were not implemented because forecasts of high pollution events were never issued by the Air Pollution Control Division due to exceptionally low PM10 levels. The Presidents' Day event strategies of maximized sweeping and driving reduction efforts, which were adopted in 1993, did not received emission reduction credits and were sporadically implemented.

6. Control of Emissions from Stationary Sources

Although there are no stationary sources located in the Aspen Attainment/Maintenance Area, the state's comprehensive permit rules will limit emissions from any new source that may, in the future, locate in the area. These rules include: 1) Regulation No. 3, "Stationary Source Permitting and Air Pollutant Emission Notice Requirements," 2) the "Common Provisions" regulation, and 3) Regulation No. 6, "Standards of Performance for New Stationary Sources". The Common Provisions, and Parts A and B of Regulation No. 3, already are included in the approved SIP. Regulation No. 6 implements the federal standards of performance for new stationary sources. The maintenance plan revision makes no changes to these regulations. This reference to Regulation No. 6 shall not be construed to mean that this regulation is included in the SIP. As indicated above, emissions from new or modified major stationary sources emissions of PM10 are controlled under Regulation No. 3's nonattainment-area New Source Review (NSR) permitting requirements. The NSR provisions require all new and modified major stationary sources to apply emission control equipment that achieves the "Lowest Achievable Emission Rate" (LAER) and to obtain emission offsets from other stationary sources of PM10. The EPA approval of this maintenance plan revision effectively continues the Prevention of Significant Deterioration (PSD) permitting requirements. The PSD requirements are a relaxation from the NSR requirements, as LAER becomes the less stringent "Best Available Control Technology" (BACT), and offsets are not required. The application of these provisions is possible, but not foreseen, in the Aspen area.

7. Federal Motor Vehicle Emission Control Program

The Federal Motor Vehicle Emission Control Program has reduced PM10 emissions through a continuing process of requiring diesel engine manufacturers to produce new vehicles that meet tighter and tighter emission standards. As older, higher emitting diesel vehicles are replaced with newer vehicles, PM10 emissions in the Aspen area will be reduced.

SECTION 5: MAINTENANCE PLAN

A. REQUIREMENTS

Section 107(d)(3)(E) of the Clean Air Act provides that, for an area to be redesignated to an attainment classification, the EPA must fully approve a maintenance plan which meets the requirements of CAA Section 175A. The maintenance plan will constitute a SIP revision and must provide for maintenance of the relevant NAAQS in the area for at least ten years after redesignation. The EPA first approved a PM10 redesignation request and maintenance plan for the Aspen area on May 15, 2003 (68 FR 26212), which became effective on July 14, 2003.

An additional requirement (Section 175A(d)) is the submittal of a SIP revision eight years after the original redesignation request/maintenance plan is approved that provides for maintenance of the NAAQS for an additional ten years following the first ten-year period. The State of Colorado has satisfied this commitment by submitting this revised maintenance plan as required by the CAA and EPA requirements.

Section 175A further states that the plan shall contain such additional control measures as necessary to ensure maintenance. All current nonattainment area control measures shall remain in place, except for the most stringent NSR stationary source permitting requirements (see Section 4.B.6.). The maintenance plan revision shall contain a contingency plan to ensure the prompt correction of any unforeseen violation of the PM10 NAAQS. Failure to maintain the NAAQS and triggering of the contingency plan will not necessitate a revision of the SIP Element, unless required by the EPA Administrator, as stated in CAA Section 175A(d).

The provisions that are addressed in this maintenance plan revision include emission inventories (for a base year, an interim year and a maintenance year), a maintenance demonstration, an emission budget, an approved monitoring network, verification of continued attainment, and a contingency plan.

B. EMISSION INVENTORIES

The below emission inventories include the 2008 base year, 2015 interim year and the 2023 maintenance year. These inventories reflect the base and projected conditions in the Aspen Attainment/Maintenance Area, and account for the emission control measures that were adopted as part of the original redesignation request and the previous 10-year maintenance plan. Unlike the previous Aspen plans where the emission inventories were based on a grid system of the attainment/maintenance area, the updated emission inventories for 2008, 2015 and 2023 are based on a number of EPA-approved emissions modeling methods that are detailed in the Technical Support Document. Consequently, there are significant differences between the emission inventories in the previous plan and this updated PM10 maintenance plan.

1. 2008 Base Year Emission Inventory

The 2008 Base Year Emission Inventory for the Aspen Attainment/Maintenance Area is presented below. This updated emission inventory incorporates the most current estimates for the following eight (8) source categories:

- Commercial Cooking
- Construction
- Fuel Combustion
- Highway Vehicles
- Non-Road
- Paved/Unpaved Road Dust
- Structure Fires
- Wood-burning

The mobile source inventory (paved/unpaved road dust and highway vehicles) has been updated to reflect the following:

- Latest traffic (VMT) estimates from the Colorado Department of Transportation
- Revised emission factors and methods for determining paved road emissions
- Road paving of unpaved roads that has occurred in the area
- Vehicle exhaust emissions based on most up-to-date fleet mix

All emission estimates were prepared by using EPA-approved methods and assigned to the area comprising the Aspen Attainment/Maintenance Area.

Table 2 presents the 2008 PM10 Base Year emission estimates for each source category in tons per year and pounds per average day.

Table 2: 2008 PM10 Base Year Emission Inventory (Aspen Attainment/Maintenance Area)

Source Category	2008 PM10 [tons/year]	2008 PM10 [lbs/day]
Commercial Cooking	1.72	9.4
Construction	35.97	197.1
Fuel Combustion	0.13	0.7
Highway Vehicles	9.22	50.5
Non-Road	6.35	34.8
Road Dust	150.23	823.2
Structure Fires	0.07	0.4
Wood Burning	21.01	115.1
Totals:	**224.69**	**1,231.2**

2. 2015 Interim Year Emission Inventory

Table 3 presents the 2015 PM10 Interim Year emission estimates for each source category in tons per year and pounds per average day.

Table 3: 2015 PM10 Interim Year Emission Inventory (Aspen Attainment/Maintenance Area)

Source Category	2015 PM10 [tons/year]	2015 PM10 [lbs/day]
Commercial Cooking	1.93	10.6
Construction	40.46	221.7
Fuel Combustion	0.15	0.8
Highway Vehicles	7.45	40.8
Non-Road	4.85	26.6
Road Dust	174.54	956.4
Structure Fires	0.09	0.5
Wood Burning	23.63	129.5
Totals:	**253.11**	**1,386.9**

3. 2023 Maintenance Year Emission Inventory

Table 4 presents the 2023 PM10 Maintenance Year emission estimates for each source category in tons per year and pounds per average day.

Table 4: 2023 PM10 Maintenance Year Emission Inventory (Aspen Attainment/Maintenance Area)

Source Category	2023 PM10 [tons/year]	2023 PM10 [lbs/day]
Commercial Cooking	2.30	12.6
Construction	48.03	263.2
Fuel Combustion	0.18	1.0
Highway Vehicles	6.84	37.5
Non-Road	2.87	15.7
Road Dust	202.34	1,108.7
Structure Fires	0.11	0.6
Wood Burning	28.05	153.7
Totals:	**290.70**	**1,593**

C. MAINTENANCE DEMONSTRATION

This maintenance plan revision provides for continued maintenance of the 24-hour PM10 NAAQS through the year 2023, the 20-year period after the original redesignation request and maintenance plan was approved by the EPA in 2003. Because there have never been any exceedances of the annual PM10 NAAQS in Aspen, an analysis for maintenance of the annual standard was not prepared for the original redesignation request and maintenance plan. The EPA subsequently revoked the annual standard in 2006.

A design day concentration of 79 ug/m3 has been selected as a conservative value that represents the highest 24-hour maximum PM10 value recorded in Aspen during 2006-2008. This 79 ug/m3 concentration occurred on March 13, 2007. No reduction for background values has been taken into account for the design day value, making the 79 ug/m3 a conservative estimate of PM10 ambient air concentrations in Aspen. The design value likely overstates the actual amount of PM10.

The emission inventory data presented in this document is used to determine the growth in PM10 emissions from the 2008 base year to the 2023 maintenance year. The emission inventory shows an increase in PM10 from 1,231.2 pounds per day in 2008 to 1,593 pounds per day in 2023.

This represents an increase of 29.4 percent in emissions:

1,593/1,231.2 =1.294, or 29.4 percent.

The design day concentration of 79 ug/m3 of PM10 is then increased 29.4 percent to "roll forward" to the 2023 attainment year.

This roll-forward modeling results in a 2023 concentration of 102.2 ug/m3:

79 ug/m3 x 1.294 = 102.2 ug/m3

Since 102.2 ug/m3 is below the 150 ug/m3 standard, maintenance is demonstrated through 2023.

D. PM10 EMISSION BUDGET

Federal "transportation conformity" regulations provide for the use of mobile source emission budgets in making conformity determinations in the area. The emission budget serves as a ceiling on mobile source emissions that federally funded or approved transportation projects must comply or conform.

This maintenance plan revision establishes a mobile source PM10 emission budget for the Aspen Attainment/Maintenance Area of 1,146 lbs/day for 2023 and beyond. This budget is the total of the 2023 mobile source PM10 emissions (see Section 5.B.3. above), which includes PM10 emissions from highways, paved roads, and unpaved roads.

This budget has been adopted in the AQCC's "Ambient Air Quality Standards for the State of Colorado" regulation.

E. MONITORING NETWORK/VERIFICATION OF CONTINUED ATTAINMENT

The Air Pollution Control Division has monitored ambient PM10 concentrations in the Aspen area since 1985. The division has operated, and will continue to operate, the Aspen PM10 monitoring network in full accordance with the federal provisions of 40 CFR Part 58 and the EPA-approved Colorado Monitoring SIP Element. The division also will analyze the monitoring data to verify continued attainment of the PM10 NAAQS. This information will provide the necessary information to determine whether the Aspen area continues to attain the PM10 NAAQS. Detailed information regarding the state's monitoring efforts and historical monitoring data can be found in Section 2 of this document.

F. CONTINGENCY PLAN

Section 175(A)(d) of the Clean Air Act requires that the maintenance plan contain contingency provisions to assure that the state will promptly correct any violation of the PM10 NAAQS that may occur after the redesignation of the area to attainment. The EPA's redesignation guidance notes that the state is not required to have fully adopted contingency measures that will take effect without further action by the state. However, the contingency plan should ensure that contingency measures are adopted expediently once the need is triggered. The primary elements of the contingency plan involve the tracking and triggering mechanisms to determine when contingency measures would be needed, and a process for implementing appropriate control measures.

1. Tracking

The tracking plan for the Aspen area will consist of monitoring and analyzing PM10 concentrations. In accordance with 40 CFR Part 58, Colorado will continue to operate and maintain the Aspen PM10 monitoring network.

2. Trigger 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 normally will have an appropriate timeframe to correct the violation with implementation of one or more adopted contingency measures. In the event that violations continue to occur, additional contingency measures will be adopted until the violations are corrected.

Upon notification of a PM10 NAAQS exceedance, the Air Pollution Control Division and local government staff in the Aspen area will develop appropriate contingency measure(s) intended to prevent or correct a violation of the PM10 standard. Information about historical exceedances of the standard, the meteorological conditions related to the recent exceedance(s), and the most recent estimates of growth and emissions will be reviewed. The possibility that an exceptional event occurred also will be evaluated. (Notification to the EPA and to the local governments in the Aspen area of any exceedance generally will occur within 30 days, but no later than 45 days). This process will be completed within six months of the exceedance notification.

If a violation of the PM10 NAAQS has occurred, a public hearing process at the state and local level will begin. If the AQCC agrees that the implementation of local measures will prevent further exceedances or violations, the AQCC may endorse or approve of the local measures without adopting state requirements. If, however, the AQCC finds locally-adopted contingency measures to be inadequate, the AQCC will adopt state-enforceable measures as deemed necessary to prevent additional exceedances or violations. Contingency measures will be adopted and fully implemented within one year of a PM10 NAAQS violation. Any state-enforceable measures will become part of another revised maintenance plan, submitted to the Colorado Legislature and the EPA for approval.

3. Potential Contingency Measures

The APCD and local government staff may choose one or more of the following contingency measures to recommend to local officials and the AQCC for consideration. Contingency measures will be selected that quickly bring the area back into compliance with the PM10 NAAQS and that specifically meet the needs of the Aspen area. It is likely that no federal or state monies will be available to fund the implementation of the selected contingency measure(s). Most, if not all, of the costs will be borne by local citizens and governments, local businesses, and state government agencies.

- Increased street sweeping requirements
- More stringent street sand specifications
- Reduce the use of street sanding materials only to key areas selected by the City of Aspen for safety reasons
- Re-implementing the following measures removed from the federally-approved plan (but only if they are not being implemented at the time the contingency measures are triggered): expansion of the bus fleet by 14 buses; establishment of 400 Park 'n Ride lot spaces and a 250-space intercept parking lot; intercept lot and cross-town shuttle services
- Transportation control measures designed to reduce vehicle miles traveled
- Other emission control measures appropriate for the area based on the consideration of cost-effectiveness, PM10 emission reduction potential, economic and social considerations, or other factors that the state deems appropriate

G. SUBSEQUENT MAINTENANCE PLAN REVISIONS

This revised maintenance plan provides for continued maintenance of the PM10 NAAQS for an additional ten years beyond the original ten-year period. Consequently, no further maintenance plan updates are anticipated.