# PM10 REDESIGNATION REQUEST

# AND MAINTENANCE PLAN FOR THE

# STEAMBOAT SPRINGS AREA

Adopted by the Colorado Air Quality Control Commission
November 15, 2001

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## CHAPTER 1. INTRODUCTION

The City of Steamboat Springs, Routt County, and the State of Colorado request redesignation to an "attainment" status for the Steamboat Springs PM10 nonattainment area. The Steamboat Springs area has been designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter of ten microns or less (PM10) since 1993, and the area is presently demonstrating attainment with the PM10 NAAQS. The Maintenance Plan section of this document will demonstrate that the area will be able to maintain the NAAQS through the year 2015. The benefits of redesignation to attainment status include:

1. Areas redesignated to attainment lose the stigma associated with nonattainment of the NAAQS.

2. Areas redesignated to attainment do not become "serious" nonattainment areas even if a violation of the NAAQS occurs. 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.

This Redesignation Request and Maintenance Plan is designed to document and ensure continuing attainment of the NAAQS for PM10 in the Steamboat Springs area. This document is intended to comply with requirements of the federal Clean Air Act (CAA), and with relevant procedures and policies of the United States Environmental Protection Agency (EPA). This document is organized into three chapters. Chapter 1, *Introduction*, is provided as background information only and is not to be construed to be part of the federally-enforceable State Implementation Plan. Chapter 2, *Redesignation Submittal*, is the State's request to the EPA to redesignate the Steamboat Springs area to attainment for PM10. Chapter 3, *Maintenance Plan*, is being submitted for inclusion in the federally-enforceable State implementation Plan and provides for maintenance of the PM10 standard through the year 2015.

## A. BACKGROUND

### 1. PM10 National Ambient Air Quality Standard

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 standard to the PM10 NAAQS. The current PM10 NAAQS allow for a maximum annual average of 50 micrograms per cubic meter (ug/$m^3$) and a 24-hour average of 150 ug/$m^3$. The 24-hour PM10 NAAQS may not be exceeded more than three times 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, such as 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.

As stated in the Code of Federal Regulations (40 CFR Part 50.6),

*The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 ug/$m^3$ is equal to or less than one (based on 3-year average), and the annual arithmetic mean concentration is less than or equal to 50 ug/$m^3$ (based on 3-year average), as determined by Appendix K.*

In general, demonstrating attainment requires collecting representative air monitoring data and using approved measuring instruments and procedures, with adequate quality assurance and quality control. The three most recent years are examined, during which the average annual number of exceedances must be less than or equal to one. The standard allows for a maximum annual average of 50 ug/$m^3$ and a 24-hour average of 150 ug/$m^3$. The 24-hour standard may not be exceeded more than three times over any three year period. Air quality measurements in the Steamboat Springs area satisfy this requirement, as shown in Chapter 2.

### 2. Steamboat Springs Nonattainment Area Classification History

The Steamboat Springs area was designated by the EPA as a “moderate” nonattainment area on December 21, 1993 due to numerous exceedances of the 24-hour PM10 NAAQS.

## B. ORGANIZATIONS INVOLVED IN PREPARING AND APPROVING PLAN

Preparation of this PM10 Redesignation Request/Maintenance Plan was a cooperative effort of the City of Steamboat Springs, Routt County, the Colorado Department of Transportation (CDOT), and the Air Pollution Control Division (APCD) of the Colorado Department of Public Health and Environment (CDPHE). The EPA, through its regional office in Denver, provided policy advice and technical assistance, and is responsible for final approval of this redesignation request and maintenance plan.

## CHAPTER 2. REDESIGNATION SUBMITTAL

The State of Colorado requests that the EPA redesignate the Steamboat Springs nonattainment area to attainment status with respect to the NAAQS for PM10. The following information demonstrates, as required by Section 107(d)(3)(E) of the CAA, that the Steamboat Springs area has attained the PM10 NAAQS. This is based on quality assured monitoring data representative of the location of expected maximum concentrations of PM10 in the area.

### A. REQUIREMENTS FOR REDESIGNATION

Section 107(d)(3)(D) and (E) of the CAA defines the five required components of a redesignation request and maintenance plan. These components and their descriptions follow:

Attainment of the Standard

The State must show that the area is attaining the PM10 NAAQS. This demonstration must be based on monitoring data representative of the location of the expected maximum concentrations of PM10 in the nonattainment area.

State Implementation Plan (SIP) Approval

The State must demonstrate that it has a fully approved State Implementation Plan (SIP) Element for Steamboat Springs under Section 110(k) of the CAA.

Permanent and Enforceable Improvement in Air Quality

The State must demonstrate that the improvement in air quality leading to redesignation is due to permanent and federally enforceable emissions reductions.

Section 110 and Part D Requirements

The State must meet all requirements of Section 110 and Part D of the CAA. Section 110 describes general requirements of SIPs, while Part D pertains to requirements applicable to nonattainment areas.

Maintenance Plan

The State must have a fully approved maintenance plan that meets the requirements of Section 175A of the CAA. This plan must provide for the maintenance of the NAAQS for at least 10 years following redesignation, and the plan must contain a contingency plan that describes potential control measures that could be implemented to ensure continued maintenance of the PM10 NAAQS. The maintenance plan is set out in Chapter 3.

## B. STEAMBOAT SPRINGS ATTAINMENT/MAINTENANCE AREA BOUNDARIES

The boundary for the Steamboat Springs PM10 attainment/maintenance area is defined as follows:

On the East: The Routt National Forest

On the South: The southern border of sections 19, 20, 21, T4N, R84W of the 6th P.M. and the southern border of sections 23, 24, T4N, R85W of the 6th P.M.

On the West: Beginning at the southwestern corner of section 23, T4N, R85W of the 6th P.M., north along the western border of sections 23, 14, 11, T4N, R85W. Thence, along the ridge which bisects sections 35, 36, 25, 24, 13, 14, 11, 12, 1, T5N, R85W, and sections 36, 25, 24, T6N, R85W. Thence, heading northwest along the ridge which bisects sections 23, 15, 10, 9, 4, T6N, R85W of 6th P.M. Thence, heading northeast along the ridge which bisects sections 33, 34, 35, 36, 25 T7N, R85W and sections 30 and 19 of T7N, R84W. Thence, north along the N ½ of the western edge of section 19, to the NW corner of section 18, T7N, R84W.

On the North: The northern boundary of sections 16, 17, 18 T7N, R84W of the 6th P.M.

**Figure 1.**

**Map of the Steamboat Springs Attainment/Maintenance Area**

## C. MONITORING DATA AND ATTAINMENT DEMONSTRATION

Monitoring for PM10 in Steamboat Springs began in 1985. The following tables show good quarterly data completeness since 1991. Data recovery is calculated by calendar quarter, and the tables show the number of actual samples days divided by the number of scheduled samples days, with the resulting data recovery. Valid quarters must have at least 75 percent data recovery. Quarters not meeting this criterion are bolded in the tables below.

**PM10 Data Completeness at the Courthouse Annex Monitoring Site, 136 6th Street**
**1991 through 2000**
**(# samples collected / # scheduled samples) x 100 = (%)**

| Year | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | Overall |
|---|---|---|---|---|---|
| **1991** | 43/45 (96%) | 45/45 (100%) | 45/46/ (98%) | 41/46 (89%) | 174/182 (96%) |
| **1992** | 64/66 (97%) | 88/91 (97%) | 83/92 (90%) | 85/92 (92%) | 320/341 (94%) |
| **1993** | 89/90 (99%) | 85/91 (93%) | 86/92 (93%) | 92/92 (100%) | 352/365 (96%) |
| **1994** | 87/90 (97%) | 82/91 (90%) | 88/92 (96%) | 85/92 (92%) | 342/365 (94%) |
| **1995** | 90/90 (100%) | 81/91 (89%) | 90/92 (98%) | 82/92 (89%) | 343/365 (94%) |
| **1996** | 87/91 (96%) | 91/91 (100%) | 75/92 (82%) | **54/92 (59%)** | 307/366 (84%) |
| **1997** | 75/90 (83%) | 89/91 (98%) | 89/92 (97%) | 86/92 (93%) | 339/365 (93%) |
| **1998** | 84/90 (93%) | 90/91 (99%) | 90/92 (98%) | 88/92 (96%) | 352/365 (85%) |
| **1999** | 78/90 (87%) | 89/91 (98%) | 79/92 (86%) | **66/92 (72%)*** | 312/365 (85%) |
| **2000** | 83/91 (91%) | 80/91 (88%) | 90/92 (98%) | 84/92 (91%) | 337/366 (92%) |

*** BEGINNING IN 1998, THIS MONITORING SITE IS REQUIRED TO OPERATE ON A ONE-IN-EVERY-THREE-DAY SCHEDULE, THOUGH IT IS ACTUALLY OPERATED ON A DAILY BASIS. THE DATA COMPLETENESS FOR THE QUARTER IS, THEREFORE, GREATER THAN 100% (66/31 = 213%).**

**PM10 Data Completeness at the Health and Human Services Bldg. Monitoring Site, 325 7th Street**
**1990 through 1996***
**(# samples collected / # scheduled samples) x 100 = (%)**

| Year | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | Overall |
|---|---|---|---|---|---|
| **1990** | N / A | N / A | N / A | 37/38 (97%) | 37/38 (97%) |
| **1991** | 45/45 (100%) | 43/45 (96%) | 39/46 (85%) | 38/46 (83%) | 165/182 (91%) |
| **1992** | 42/46 (91%) | 38/45 (84%) | 44/46 (96%) | 42/46 (91%) | 166/183 (91%) |
| **1993** | 43/45 (96%) | 38/46 (83%) | 43/46 (93%) | 44/46 (96%) | 168/183 (92%) |
| **1994** | 41/45 (91%) | **31/45 (69%)** | 42/46 (91%) | 39/46 (85%) | 153/182 (84%) |
| **1995** | 40/45 (89%) | **22/46 (48%)** | 40/46 (87%) | 43/46 (93%) | 145/183 (79%) |
| **1996** | **15/45 (33%)** | **31/46 (67%)** | 28/31 (90%) | N / A | **74/122 (61%)** |

* Sampling began 10/18/90 and ended 8/31/96.

The next two tables list the yearly maximum, second maximum, estimated exceedances and annual average for Steamboat Springs at both monitoring sites.

**PM10 Monitoring Data for the Courthouse Annex Monitoring Site, 136 6th Street**
**1991 through 2000**
**(annual average for those years with any quarterly data recovery less than 75% is shown in parentheses)**

| Year | Maximum Conc. µg/m$^3$ | 2nd Max. Conc. µg/m$^3$ | Yearly Estimated Exceedances | 3-year Avg. Estimated Exceedances | Annual Avg. Conc. µg/m$^3$ |
|---|---|---|---|---|---|
| **1991** | 138 | 127 | 0.00 | **2.31** | 38 |
| **1992** | 119 | 110 | 0.00 | **1.40** | 35 |
| **1993** | **158** | 151 | 1.01 | 0.34 | 33 |
| **1994** | 154 | 148 | 0.00 | 0.34 | 32 |
| **1995** | 139 | 135 | 0.00 | 0.34 | 32 |
| **1996** | **158** | 137 | 1.05 | 0.35 | (32) |
| **1997** | 117 | 112 | 0.00 | 0.35 | 28 |
| **1998** | 82 | 77 | 0.00 | 0.35 | 26 |
| **1999** | 121 | 109 | 0.00 | 0.00 | 26 |
| **2000** | 98 | 96 | 0.00 | 0.00 | 25 |

Note: Exceptional/natural event data exists for 1994 and 1999 but is not included in the summary calculations. On March 16, 1994, a concentration of 196 ug/m$^3$ was attributed to the demolition/clean-up of debris due to a fire at a neighboring building. On March 31, 1999, a concentration of 148 ug/m$^3$ was attributed to a regional dust storm.

**PM10 Monitoring Data for the Health and Human Services Bldg. Monitoring Site, 325 7th Street**
**1990 through 1996***
**(annual average for those years with any quarterly data recovery less than 75% is shown in parentheses)**

| Year | Maximum Conc. µg/m$^3$ | 2nd Max. Conc. µg/m$^3$ | Yearly Estimated Exceedances | 3-year Avg. Estimated Exceedances | Annual Avg. Conc. µg/m$^3$ |
|---|---|---|---|---|---|
| **1990** | 96 | 85 | 0.00 | N / A | (41) |
| **1991** | **171** | 153 | 2.00 | N / A | 37 |
| **1992** | 122 | 112 | 0.00 | 0.67 | 29 |
| **1993** | 128 | 126 | 0.00 | 0.67 | 28 |
| **1994** | 142 | 124 | 0.00 | 0.00 | (28) |
| **1995** | 118 | 114 | 0.00 | 0.00 | (23) |
| **1996** | 83 | 77 | 0.00 | 0.00 | (23) |

* Sampling began 10/18/90 and ended 8/31/96.

## D. MAXIMUM CONCENTRATION MONITORING

As illustrated in Chapter 3., the highest PM10 emissions and concentrations occur in the central Steamboat Springs area. This is where the majority of residential, commercial, and pedestrian activities occur, and it is the area where the dispersion of pollutants is likely to be the most problematic due to temperature inversions and valley-bottom topography. The APCD's two monitoring sites have been located in the center of these high emission and concentration areas, and are believed to be representative of maximum PM10 concentrations.

## E. STATE IMPLEMENTATION PLAN APPROVAL

The following presents a brief summary of the development and the approval of the Steamboat Springs PM10 nonattainment SIP Element.

### 1. 1995 SIP ELEMENT

This initial Steamboat Springs SIP Element was adopted by the AQCC in September 1995. The control measures included: 1) local restrictions on woodburning devices, 2) specifications for street sanding materials (no more than 1% fines allowed), and 3) street sweeping requirements on Lincoln Avenue (once after each sanding event. The plan also included monitoring data, emission inventories, and dispersion modeling which demonstrated attainment of the PM10 NAAQS by December 1999 and continuing through December 2002. The EPA did not approve this SIP Element at the request of the State due to revisions to control measures and modeling that occurred before EPA could take action on the plan.

### 2. 1996 SIP ELEMENT

This revised SIP Element was adopted by the AQCC in October 1996. The control measures were revised to included: 1) local restrictions on woodburning devices, 2) specifications for street sanding materials (no more than 2% fines allowed), 3) street sweeping requirements on Lincoln Avenue (four times after each sanding event), and 4) street sand reductions of 10% on State highways. The plan also included revised monitoring data, emission inventories, and dispersion modeling which demonstrated attainment of the PM10 NAAQS by December 1999 and continuing through December 2002. In addition, contingency measures (additional street sweeping if the area violated the NAAQS) and an emergency episode plan (suspension of open burning, voluntary wood and coal burning curtailment, and voluntary

driving reductions if a NAAQS exceedance was expected) were adopted. This SIP Element fully replaced the 1995 Element, and the EPA approved the 1996 SIP Element on December 31, 1997 (62 FR 68188).

## F. PERMANENT AND ENFORCEABLE IMPROVEMENT IN AIR QUALITY

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

### 1. OVERVIEW

It is reasonable to attribute the attainment of the PM10 NAAQS in the Steamboat Springs 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 clearly not responsible for improved ambient PM10 levels in the Steamboat Springs area. Over the last ten years, the area has experienced strong growth while at the same time experienced PM10 concentrations well below the NAAQS. The Colorado State Demographer's Office reports that between 1990 and 2000, the population of Routt County grew by 40 percent. A review of the Colorado Department of Transportation's (CDOT) traffic counts for Highway 40 in central Steamboat Spring indicates average daily traffic grew by 56 percent from 1990 to 1999. During this period of growth, attainment of the PM10 NAAQS was demonstrated, and few concentrations above 100 ug/$m^3$ were measured.

Favorable meteorology is also an unlikely reason why the area's PM10 concentrations are below the NAAQS. Although winter and spring meteorological conditions are highly variable in mountain settings, there is no evidence to suggest that meteorological conditions experienced in the 1990's have not been "typical" (though it is difficult to make concrete conclusions based on short-term meteorological records. The APCD concludes that the good air quality in the Steamboat Springs area is the result of the implementation of emission reduction measures, not meteorological fluctuations.

## 2. CONTROL MEASURES

The improvement in air quality in the Steamboat Springs area is due to enforceable control measures adopted as part of the federal SIP. The following describes the control measures that brought the Steamboat Springs area into attainment of the PM10 NAAQS.

### a. Woodburning Emission Controls

The City of Steamboat Springs and Routt County have adopted local ordinances and resolutions that limit the number and types of woodburning devices in new construction in the Steamboat Springs area. Installation of new solid fuel burning devices is limited to one approved device for any building. These measures were adopted locally in the late 1980's and early 1990's and included in State regulation in 1995 (Section VIII.E. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements)). The rule was approved by EPA in 1997. The requirements as modified in Attachment B will remain part of State regulation and the federal SIP.

### b. Street Sanding Controls

There is a requirement that any user that applies street sanding materials in the Steamboat Springs attainment/maintenance area must use materials containing less than two percent fines, except on U.S. Highway 40 from the junction of U.S. Highway 131 towards Rabbit Ears Pass. This strategy was adopted in 1996 and approved by EPA in 1997, and is defined in detail in Section VIII.B. of the "State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements). The requirements as modified in Attachment B will remain part of State regulation and the federal SIP.

### c. Street Sweeping Requirements

There are street sweeping requirements for a defined section of Lincoln Avenue (Highway 40 in town). Until final approval of this redesignation request and maintenance plan by the EPA, street cleaning using vacuum sweepers or any other sweepers with equal efficiency had to be performed four times within four days of the roadways becoming free and clear of snow and ice following each sanding deployment use. Upon the effective date of EPA's approval of this maintenance plan, street sweeping must occur two times within the four day period described above. These requirements are defined in

detail in Section VIII.D. of the “State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements). The requirements as modified in Attachment B will remain part of State regulation and the federal SIP.

**d. Reduction in the Amount of Street Sand Applied**

Until final approval of this redesignation request and maintenance plan by the EPA, there was a requirement that CDOT reduce the amount of sand applied on U.S. Highways 40 and 131 in the Steamboat Springs attainment/maintenance area by 10 percent. This strategy was adopted in 1996 and approved by EPA in 1997, and was defined in detail in Section VIII.C. of the “State Implementation Plan-Specific Regulations for Nonattainment - Attainment/Maintenance Areas (Local Elements). This requirement has been eliminated from the State regulation cited above and removed from the federal SIP upon approval of this maintenance plan by the EPA.

**e. Control of Emissions from Stationary Sources**

The State’s comprehensive permit rules will limit emissions from any new source that may, in the future, locate in the Steamboat Springs area. These rules include: 1) Regulation No. 3, "Air Pollution Emission Notices, Construction Permits and Fees, Operating Permits, and Including the Prevention of Significant Deterioration," 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, are already included in the approved SIP. Regulation No. 6 implements the federal standards of performance for new stationary sources. The maintenance plan 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. Once this redesignation request and maintenance plan has been approved by the EPA, the prevention of significant deterioration (PSD) permitting requirements become effective. 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 Steamboat Springs area.

### f. Federal Motor Vehicle Emission Control Program

The FMVECP 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 Steamboat Springs area will be reduced.

## G. CLEAN AIR ACT SECTION 110 AND PART D REQUIREMENTS

For the purposes of redesignation, all of the requirements of CAA Section 110 and Part D applicable to the area must first be met. The requirements of Section 110 and Part D applicable to the Steamboat Springs area are already included in the SIP for Colorado and have already been approved by EPA. In particular, see EPA's final approval of the Steamboat Springs PM10 Nonattainment SIP Element dated December 31, 1997 (62 FR 68188).

## CHAPTER 3. MAINTENANCE PLAN

### A. REQUIREMENTS

Section 107(d)(3)(E) of the CAA provides that for an area to be redesignated to an attainment classification, 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. Since the requirement is for ten years after redesignation, some lead time for the EPA approval process (up to 18 months per CAA Section 107(d)(3)(D)) should be considered in establishing the maintenance year, which the State determines to be 2015. 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 commits to submit such a revised maintenance plan as required by the CAA and EPA policy.

Section 175A further states that the plan shall contain such additional control measures as necessary to ensure maintenance. These control measures are described in Chapter 2., although only existing controls are necessary to ensure long-term maintenance. The maintenance plan 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 include emission inventories (for a base year and a future year), a maintenance demonstration, an emission budget, an approved monitoring network, verification of continued attainment, and a contingency plan.

### B. EMISSION INVENTORIES

The following presents PM10 emission inventories for the 1999 attainment year and the 2015 maintenance year. These inventories reflect the base and projected conditions in the Steamboat Springs area, and take credit for the emission control measures in place **IN 1999**.

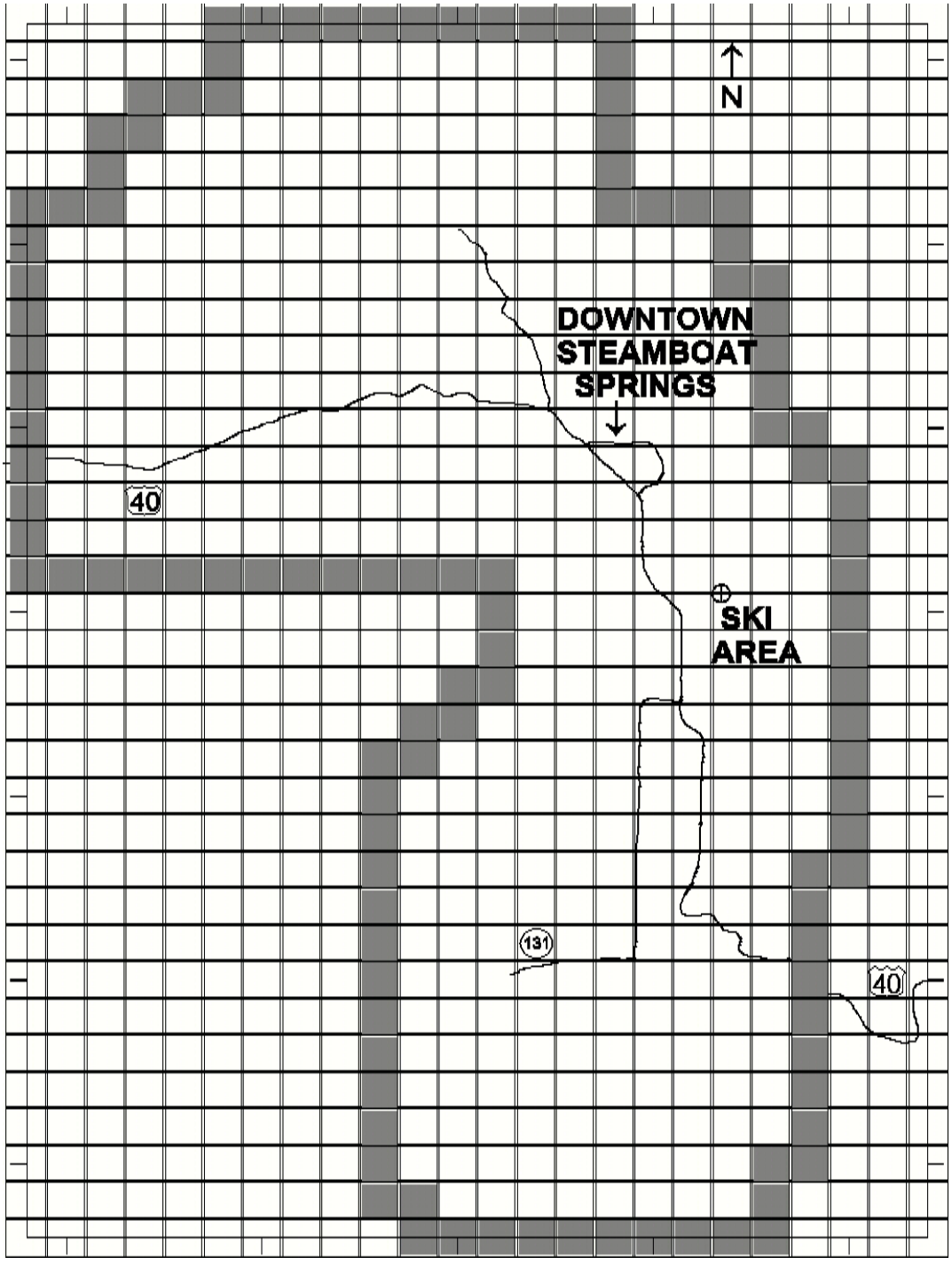
## 1. 1999 Emission Inventory

The 1999 attainment year PM10 emission inventory for the Steamboat Springs attainment/maintenance area is presented below. This inventory was taken unchanged from the 1996 revised nonattainment SIP element. All emission estimates were then assigned to geographic grids (one square kilometer each), and the following map illustrates these grids. The attainment/maintenance area lies within the grey-shaded boundary of the inventory domain.

- Aircraft emissions were determined by using EPA and APCD-developed emission factors and activity data provided by the City of Steamboat Springs.
- Restaurant emissions were developed using emission factors and survey data of activity.
- Stationary source emissions were determined by calculating allowable emissions for three facilities in the area in existence in the mid-1990's. There is an un-explained discrepancy in the 1996 SIP Element's stationary source inventory. Table III.1 presents allowable emissions for the three facilities, which add up to 336 pounds per day; Table III.2 presents these three sources' emissions at 584 pounds per day. Because the dispersion modeling utilized the 584 value, the modeling can be considered conservative. Emissions from the Craig and Hayden power plants were used in the dispersion modeling to estimate their impacts on PM10 concentrations, but these sources are outside of the Steamboat Springs emission inventory domain and their emissions are not included in the inventory.
- Woodburning emissions were determined by using EPA and APCD-developed emission factors and survey data of woodburning activities and practices in the Steamboat Springs area.
- Re-entrained dust from paved and unpaved roads were developed using APCD and CDOT vehicle miles traveled data and emission factors that were calculated using the EPA-approved formula, local silt loading data, and the application of credits from street sweeping and street sand reduction control measures.
- Mobile exhaust was determined using EPA's PART5 model.

The following table presents the 1999 daily PM10 emission estimates for each source category in pounds per day. These emissions were presented in kilograms per day in the 1996 SIP Element; they have been converted to pounds per day for this maintenance plan (kilograms x 2.2046 = pounds). Detailed explanations of the methods used to determine these emissions may be found in the Technical Support Document for this maintenance plan.

**Steamboat Springs PM10 Emission Inventory Domain and Grid System**



**1999 PM10 Emission Inventory for the Steamboat Springs Attainment/Maintenance Area (modeling domain)**

| Sources | PM10 Emissions (lbs./day) |
|---|---|
| **Aircraft** | 24 |
| **Restaurant Grills** | 99 |
| **Vehicle Exhaust** | 53 |
| **Paved Roads**<br><br>**(Highways)**<br>**(Arterials)**<br>**(Collectors)**<br>**(Locals)** | 9,122<br><br>(5,531)<br>(928)<br>(2,008)<br>(656) |
| **Unpaved Roads** | 7,519 |
| **Stationary Sources** | 584 |
| **Woodburning** | 1,057 |
| **Total** | **18,458** |

## 2. 2005, 2010, and 2015 Emission Inventories

The 2005, 2010 interim years, and the 2015 maintenance year PM10 emission inventories for the Steamboat Springs attainment/maintenance area are presented below. Emissions for each category tend to increase at a constant rate into the future, so additional inventory years between 1999 and 2015 are not necessary for demonstrating maintenance of the PM10 NAAQS.

- The 1999 estimated VMT for Lincoln Avenue (located in central Steamboat Springs) from the 1996 SIP Element was increased by 22 percent because the actual, measured average daily traffic (ADT) was 22 percent greater than the estimated 1999 ADT. This adjusted 1999 Lincoln Avenue VMT, and the 1999 estimated VMT for all other roadways, were then increased by 2.3 percent, compounded annually, to 2005, 2010, and 2015. This growth rate was calculated using Routt County population projections from the State Demographer's office, which are higher than traffic growth projections provided by CDOT. To be conservative, the higher population growth rate was utilized.
- The domain used to determine the 1999 mobile source emissions is slightly larger than the area used for the future year inventories. In the 1996 SIP Element, 1999 mobile emissions were calculated using the rectangular grid illustrated on page 16; all other emissions were determined for the smaller area resembling the African continent (the smaller area coincides with topographical features in the Steamboat Springs area and better represents the airshed. In this maintenance plan for 2005, 2010, and 2015, the smaller area is used for all emission categories.
- The 2005, 2010, and 2015 VMT was then multiplied by the appropriate paved and unpaved road emission factors to determine fugitive dust emissions. The emission factors used to develop 2005, 2010, and 2015 emissions are slightly different than the emission factors used to develop the 1999 emissions. First, a greater emission reduction credit (61 percent versus 34 percent) for vacuum street sweeping on Lincoln Avenue was utilized. Second, the frequency of street sweeping on Lincoln Avenue has been reduced from four to two times after each street sanding episode. Third, the 10 percent street sand reduction requirement for State Highways has been eliminated.

- The miles of unpaved roads in the area for future years are identical to the 1999 mileage. The road paving that the City of Steamboat Springs and Routt County plan on completing is not assumed in the 2005, 2010, and 2015 inventories as the paving is considered voluntary and not enforceable by the State. Even with increased VMT between 1999 and 2005, 2005 emissions are slightly less than 1999 emissions. This is due to the reduced size of the inventory domain discussed above.
- Mobile exhaust emissions for 2005, 2010, and 2015 were developed by multiplying projected VMT by emission factors produced using EPA's PART5 model. Again 2005 emissions are slightly less than 1999 emissions, even with increased VMT. This is due to the reduced size of the inventory domain discussed above and lower particulate emission rates for future years as determined by the PART5 model.
- The 1999 emissions for aircraft, restaurants, and woodburning were increased by 2.3 percent, compounded annually, to 2005, 2010, and 2015 levels.
- Stationary source emissions were completely revised by first determining the number and location of stationary sources in the inventory/modeling domain. For these six sources, actual emissions, which are required to be reported to the APCD, were then increased by 2.3 percent, compounded annually, to 2005, 2010, and 2015 levels. This is to account for increases in production or any new minor PM10 sources that may locate into the area. No major sources with potential emissions greater than 100 tons per year are located in the domain. Although there are more stationary sources in the future year inventories than in the 1999 inventory, future stationary source emissions are substantially less than 1999 emissions. This is because future year inventories were determined using actual emissions for the six sources, while the 1999 inventory was determined using allowable emissions for the three sources.

The following table presents the 2005, 2010, and 2015 daily emission estimates for each source category in pounds per day. Detailed explanations of the methods used to determine these emissions may be found in the Technical Support Document for this maintenance plan.

**2005, 2010, and 2015 PM10 Emission Inventories for the Steamboat Springs Attainment/Maintenance Area (modeling domain)**

| Sources | PM10 Emissions (lbs./day) | | |
|---|---|---|---|
| | **2005** | **2010** | **2015** |
| **Aircraft** | 27 | 30 | 34 |
| **Restaurant Grills** | 114 | 127 | 143 |
| **Vehicle Exhaust** | 52 | 56 | 63 |
| **Paved Roads**<br><br>**(Highways)**<br>**(Arterials)**<br>**(Collectors)**<br>**(Locals)** | 10,059 | 11,271 | 12,630 |
| **Unpaved Roads** | 7,233 | 8,104 | 9,080 |
| **Stationary Sources** | 242 | 271 | 304 |
| **Woodburning** | 1,216 | 1,353 | 1,522 |
| **Total** | **18,943** | **21,213** | **23,776** |

## C. MAINTENANCE DEMONSTRATION

In order for this redesignation request to be complete and approvable, the CAA requires that the maintenance plan provide for maintenance of the PM10 NAAQS for at least 10 years following EPA's approval of the plan. As stated earlier in this document, attainment of the 24-hour and annual PM10 NAAQS has been demonstrated in the Steamboat Springs area, and this maintenance demonstration will demonstrate continued attainment, or maintenance, of the 24-hour NAAQS through the year 2015. Because there have never been exceedances of the annual standard in Steamboat Springs, an analysis for maintenance of the annual standard was not prepared. Protection of the 24-hour standard should be sufficient to protect the annual standard since the 24-hour standard has always been the standard of concern. As demonstrated below, the 2015 maintenance concentration for the Steamboat Springs attainment/maintenance area is 146 ug/$m^3$.

Dispersion modeling is utilized to demonstrate maintenance of the PM10 NAAQS for the Steamboat Springs area. Maintenance is demonstrated when the highest modeled values at each receptor on the modeling grid are below the 150 ug/$m^3$. The analysis used WYNDvalley 3.11, and the protocol from the 1996 SIP Element was followed. The modeling for 1996 SIP Element's 1999 attainment demonstration is provided below (the values have changed slightly due to rounding). The table includes the eight highest modeled concentrations and the source apportionment of each concentration. Emissions from the Craig and Hayden power plants, which are located many miles west of town, were modeled to determine their impacts on the area. These impacts were added to the source specific concentrations along with a background concentration and a secondary PM10 concentration. Detailed information regarding the dispersion modeling can be found in the Technical Support Document.

**Steamboat Springs PM10 Attainment Demonstration**
**1999 Dispersion Modeling Results and Source Apportionment (ug/m$^3$)**

| Source Categories | Cell 1 | Cell 2 | Cell 3 | Cell 4 | Cell 5 | Cell 6 | Cell 7 | Cell 8 |
|---|---|---|---|---|---|---|---|---|
| **Woodburning** | 7.4 | 9.9 | 10.0 | 14.9 | 12.6 | 10.8 | 11.0 | 7.7 |
| **Restaurants** | 0.8 | 1.4 | 1.4 | 2.3 | 1.2 | 1.6 | 1.4 | 0.9 |
| **Stationary Sources** | 10.2 | 4.2 | 3.3 | 1.3 | 1.0 | 0.9 | 0.9 | 0.7 |
| **Aircraft** | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Paved Roads** | 41.0 | 48.2 | 50.5 | 67.2 | 54.7 | 58.6 | 64.9 | 58.9 |
| **Unpaved Roads** | 9.5 | 8.8 | 6.9 | 6.8 | 7.7 | 6.4 | 6.1 | 15.4 |
| **Mobile Exhaust** | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.4 | 0.3 |
| **Craig** | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Hayden** | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Secondaries** | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| **Background** | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| **Totals** | **91.3** | **95.0** | **94.5** | **115.0** | **99.6** | **100.7** | **106.8** | **106.0** |

Cell 1: 1 kilometer northwest of downtown Steamboat Springs
Cell 2: 1 kilometer west of downtown Steamboat Springs
Cell 3: downtown Steamboat Springs
Cell 4: 1 kilometer east of downtown Steamboat Springs
Cell 5: 1 kilometer south of downtown Steamboat Springs
Cell 6: 1 kilometer southeast of downtown Steamboat Springs
Cell 7: 2 kilometers east-southeast of downtown Steamboat Springs
Cell 8: 2 kilometers south-southeast of downtown Steamboat Springs

Note: Results are reported with one decimal place precision to provide representation of smaller source categories. This level of precision is not intended to suggest a level of accuracy.

The emission inventories for 2005, 2010, and 2015 were input into the dispersion model to obtain 2005, 2010, and 2015 projected PM10 concentrations. The following tables include the seven highest modeled concentrations, one additional concentration near the base of the ski area (cell 8), and the source apportionment of each concentration. Again, the modeled impacts from the Craig and Hayden power plants along with the background concentration and the secondary PM10 concentration were

added to the source specific concentrations. Detailed information regarding the dispersion modeling can be found in the Technical Support Document.

**Steamboat Springs PM10 Maintenance Demonstration**
**2005 Dispersion Modeling Results and Source Apportionment (ug/m$^3$)**

| Source Categories | Cell 1 | Cell 2 | Cell 3 | Cell 4 | Cell 5 | Cell 6 | Cell 7 | Cell 8 |
|---|---|---|---|---|---|---|---|---|
| **Woodburning** | 11.4 | 11.5 | 17.1 | 14.5 | 12.7 | 12.4 | 8.8 | 7.2 |
| **Restaurants** | 1.6 | 1.6 | 2.7 | 1.4 | 1.6 | 1.8 | 1.1 | 1.1 |
| **Stationary Sources** | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 |
| **Aircraft** | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Paved Roads** | 52.8 | 54.9 | 70.7 | 59.2 | 71.2 | 62.2 | 66.4 | 56.5 |
| **Unpaved Roads** | 10.5 | 9.8 | 7.5 | 7.3 | 7.0 | 8.5 | 6.7 | 7.6 |
| **Mobile Exhaust** | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 |
| **Craig** | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Hayden** | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Secondaries** | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| **Background** | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| **Totals** | **99.0** | **100.5** | **120.7** | **105.1** | **115.2** | **107.7** | **105.8** | **95.2** |

Cell 1: 1 kilometer northwest of downtown Steamboat Springs
Cell 2: 1 kilometer west of downtown Steamboat Springs
Cell 3: downtown Steamboat Springs
Cell 4: 1 kilometer east of downtown Steamboat Springs
Cell 5: 1 kilometer southeast of downtown Steamboat Springs
Cell 6: 1 kilometer south of downtown Steamboat Springs
Cell 7: 2 kilometers south-southeast of downtown Steamboat Springs
Cell 8: 1 kilometer west of Steamboat Springs Ski Area Lodge

Note: Results are reported with one decimal place precision to provide representation of smaller source categories. This level of precision is not intended to suggest a level of accuracy.

**Steamboat Springs PM10 Maintenance Demonstration**
**2010 Dispersion Modeling Results and Source Apportionment (ug/m$^3$)**

| Source Categories | Cell 1 | Cell 2 | Cell 3 | Cell 4 | Cell 5 | Cell 6 | Cell 7 | Cell 8 |
|---|---|---|---|---|---|---|---|---|
| **Woodburning** | 12.7 | 12.7 | 19.0 | 16.2 | 14.1 | 13.8 | 9.8 | 8.0 |
| **Restaurants** | 1.8 | 1.8 | 3.0 | 1.6 | 1.7 | 2.0 | 1.2 | 1.3 |
| **Stationary Sources** | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 |
| **Aircraft** | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Paved Roads** | 59.2 | 61.5 | 79.2 | 66.4 | 79.8 | 69.7 | 74.4 | 63.3 |
| **Unpaved Roads** | 11.8 | 11.0 | 8.4 | 8.2 | 7.8 | 9.6 | 7.5 | 8.5 |
| **Mobile Exhaust** | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 |
| **Craig** | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Hayden** | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Secondaries** | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| **Background** | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| **Totals** | **108.1** | **109.8** | **132.4** | **115.0** | **126.3** | **117.9** | **115.8** | **104.0** |

Cell 1: 1 kilometer northwest of downtown Steamboat Springs
Cell 2: 1 kilometer west of downtown Steamboat Springs
Cell 3: downtown Steamboat Springs
Cell 4: 1 kilometer east of downtown Steamboat Springs
Cell 5: 1 kilometer southeast of downtown Steamboat Springs
Cell 6: 1 kilometer south of downtown Steamboat Springs
Cell 7: 2 kilometers south-southeast of downtown Steamboat Springs
Cell 8: 1 kilometer west of Steamboat Springs Ski Area Lodge

Note: Results are reported with one decimal place precision to provide representation of smaller source categories. This level of precision is not intended to suggest a level of accuracy.

**Steamboat Springs PM10 Maintenance Demonstration**
**2015 Dispersion Modeling Results and Source Apportionment (ug/m$^3$)**

| Source Categories | Cell 1 | Cell 2 | Cell 3 | Cell 4 | Cell 5 | Cell 6 | Cell 7 | Cell 8 |
|---|---|---|---|---|---|---|---|---|
| **Woodburning** | 14.2 | 14.3 | 21.4 | 18.2 | 15.9 | 15.5 | 11.0 | 9.0 |
| **Restaurants** | 2.0 | 2.0 | 3.4 | 1.8 | 2.0 | 2.2 | 1.4 | 1.4 |
| **Stationary Sources** | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.5 |
| **Aircraft** | 0.2 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Paved Roads** | 66.3 | 69.0 | 88.7 | 74.4 | 89.4 | 78.1 | 83.4 | 71.0 |
| **Unpaved Roads** | 13.2 | 12.3 | 9.4 | 9.2 | 8.8 | 10.7 | 8.4 | 9.6 |
| **Mobile Exhaust** | 0.4 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.3 |
| **Craig** | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **Hayden** | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Secondaries** | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| **Background** | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 | 9.4 |
| **Totals** | **118.6** | **120.4** | **145.8** | **126.3** | **138.9** | **129.5** | **127.1** | **113.9** |

Cell 1: 1 kilometer northwest of downtown Steamboat Springs
Cell 2: 1 kilometer west of downtown Steamboat Springs
Cell 3: downtown Steamboat Springs
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Cell 5: 1 kilometer southeast of downtown Steamboat Springs
Cell 6: 1 kilometer south of downtown Steamboat Springs
Cell 7: 2 kilometers south-southeast of downtown Steamboat Springs
Cell 8: 1 kilometer west of Steamboat Springs Ski Area Lodge

Note: Results are reported with one decimal place precision to provide representation of smaller source categories. This level of precision is not intended to suggest a level of accuracy.

## D. MAINTENANCE PLAN CONTROL MEASURES

The maintenance plan includes the requirements of State Implementation Plan Specific Regulations for Nonattainment -- Attainment/Maintenance Areas (Local Elements) Section VIII, Steamboat Springs PM10 Attainment/Maintenance Area, as amended by the Commission on November 15, 2001, a copy of which is attached. The maintenance plan eliminates from the SIP certain unnecessary reporting requirements, obsolete contingency measures, and the 10 percent street sand reduction requirement for State highways, as well as relaxing the Lincoln Avenue street sweeping requirements from four to two times after each sanding event. The street sand specifications, and the woodburning requirements previously included in the SIP are retained in substantially the same form.

The stationary source controls in the Common Provisions, 5 CCR 1001-2; Regulation No. 3, Air Contaminant Emissions Notices, 5 CCR 1001-5; and Regulation No. 6, Standards of Performance for New Stationary Sources, 5 CCR 1001-8. The Common Provisions, and Parts A and B of Regulation No. 3, are already included in the approved SI P. Regulation No. 6 implements the federal standards of performance for new stationary sources, but is not part of the SIP. This maintenance plan 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.

## F. 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” with.

This maintenance plan establishes an emission budget for the area of 21,773 lbs./day for 2015 and beyond for the modeling area. This budget is the total of the 2015 mobile source PM10 emissions presented in B.2. above, which includes emissions from vehicle exhaust, paved roads and unpaved roads. This budget has been adopted in the AQCC’s "Ambient Air Quality Standards for the State of Colorado" regulation, a copy of which is attached.

## G. MONITORING NETWORK/VERIFICATION OF CONTINUED ATTAINMENT

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

In addition, the State will track the progress of the maintenance plan through a periodic review (every three years) of the assumptions made in the emissions inventories to assure continued maintenance of the PM10 NAAQS. A revised inventory will be developed if assumptions indicate a significant change in the factor(s) used to develop the attainment inventory.

## H. CONTINGENCY PLAN

Section 175(A)(d) of the CAA 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. 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 Steamboat Springs area will consist of monitoring and analyzing PM10 concentrations. In accordance with 40 CFR Part 58, Colorado will continue to operate and maintain the Steamboat Springs 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 will normally have an appropriate time-frame 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 APCD and local government staff in the Steamboat Springs 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 will also be evaluated. (Notification to EPA, and to the local governments in the Steamboat Springs area, of any exceedance will generally 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 the next revised maintenance plan, submitted to the Colorado Legislature and EPA for approval.

## 3. Potential Contingency Measures

Section 175A(d) of the Clean Air Act requires the Maintenance Plan to include as potential contingency measures all of the control measures contained in the SIP before redesignation which were relaxed or modified through the maintenance plan. For the Steamboat Springs area, this includes:

- Reinstating the 10 percent street sand reduction requirement for State highways; and
- Increasing the Lincoln Avenue street sweeping frequency from two to four times after each sanding event.

In addition, 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 Steamboat Springs area. It is likely that no federal or State General Fund 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 industries, and any State government agency implementing a contingency measure.

- Increased street sweeping requirements
- Road paving requirements
- More stringent street sand specifications
- Voluntary or mandatory woodburning curtailment
- Bans on all woodburning
- Expanded, mandatory use of alternative de-icers
- Re-establishing new source review permitting requirements for stationary sources
- 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

## I. SUBSEQUENT MAINTENANCE PLAN REVISIONS

As stated above, it is required that a maintenance plan revision be submitted to the EPA eight years after the original redesignation request/maintenance plan is approved. 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 prepare and submit a revised maintenance plan as required.

## Attachment A

## Revised "Ambient Air Quality Standards" Regulation

## Attachment B

## Revised "SIP-Specific" Regulations"