

## **CHAPTER 12: AIR QUALITY CONFORMITY**

### **I. NATURE AND EXTENT OF THE AIR QUALITY PROBLEM**

As a low-density suburban and semi-rural area, Chugiak-Eagle River does not share the carbon monoxide air pollution concentrations of the Anchorage Bowl. On the other hand, Chugiak-Eagle River has not totally escaped air pollution problems. In the past, the area has experienced high dust levels, which could lead to health problems, particularly for people with heart or respiratory ailments.

The Environmental Protection Agency, which regulates dust concentrations as well as other forms of air pollution, has established standards for dust particles smaller than 10 microns (PM-10). In order to determine if the EPA PM10 standards were being met, the Municipality of Anchorage, Department of Health and Human Services began a PM10 monitoring program in 1985. The monitors placed in Eagle River recorded a total of 11 exceedances of the 24-hour National Ambient Air Quality Standards (NAAQS) of 150 micrograms per cubic meters (all exceedances occurred prior to 1987). The maximum value recorded was 336 micrograms per cubic meter.

As a result of the above described air quality violations, EPA required the Municipality to develop a plan to control the level of dust in the air in Eagle River. The Eagle River PM10 Control Plan was adopted by the Municipal Assembly on February 6, 1990 and amended on September 24, 1991. The Plan was incorporated as an amendment to the Alaska State Implementation Plan and submitted to and approved by the EPA.

The Eagle River PM-10 Control Plan identifies a nine square-kilometer nonattainment area where control efforts have been focused. This nonattainment area encompasses the Eagle River business district and surrounding residential areas, including the lower portion of the Eagle River Valley. Because 90% or more of the PM-10 was shown (based on results of receptor modeling) to be generated by vehicle traffic on unpaved roads, the plan committed to an extensive paving and road-surfacing program in the Eagle River PM-10 nonattainment area.

In 1987, even prior to the adoption of the Eagle River PM-10 Control Plan, the Municipal Street Maintenance Department, in cooperation with the Chugiak-Birchwood-Eagle River Rural Road Service Area Board, had already begun a road-surfacing program to reduce dust from the 22 miles of gravel roadway in the nonattainment area. By 1990, when the Anchorage Assembly adopted the Eagle River PM-10 Control Plan, six of these 22 miles had been paved or surfaced with recycled asphalt product (RAP). More paving and/or RAP surfacing was necessary to achieve the EPA standards, however. Towards this end, the Eagle River PM-10 Control Plan committed to paving or RAP surfacing an additional 8.6 miles of gravel roads in the nonattainment area.

A 40% reduction in PM-10 emissions was necessary to achieve compliance with EPA standards. The goal of the plan was to reduce PM-10 emissions by an estimated 56%, providing a margin of safety beyond what was required to achieve the air quality

standard. Specific roadways within the nonattainment area were targeted for paving or RAP treatment. Steady progress toward this goal was made between 1990 and 1994. By the plan's December 31, 1994 milestone date, all 8.6 miles of targeted roadway had been paved or RAP-treated. In addition to the 8.6 miles specified in the plan, surfacing has been completed on a number of additional roadways, both inside and outside of the nonattainment area. At this time all streets in the PM-10 non-attainment area in Eagle River are paved or RAP-treated. The implementation status of the Eagle River PM-10 Control Plan is summarized in Table 11.

**Table 11**  
**Eagle River PM-10 Nonattainment Area**  
**Estimated Emissions Reductions**

PM-10 Emission Control Measure	Projected Emission Reduction Required to Show Attainment (tons per day)	Estimated Emission Reduction Achieved (tons per day)	Percent Implementation Achieved
Road paving and recycled asphalt surfacing of unpaved roads	2.94	4.09	139

The State of Alaska and the Municipality have implemented all of the control measures identified in the Eagle River PM-10 Control Plan. As a result, a substantial reduction in PM-10 pollution has been achieved. Since calendar year 1988, there have been no exceedances of the NAAQS standards for PM-10 in the Eagle River. The one exception occurred in August 1992 when Mt. Spurr erupted spreading a blanket of volcanic ash over the area. Nevertheless, the Eagle River area is still designated as a PM-10 non-attainment area. Therefore, transportation plans for this area are required to undergo a PM-10 conformity determination as part of the plan update.

## **II. CONFORMITY WITH FEDERAL CLEAN AIR ACT REQUIREMENTS**

Air quality conformity regulations state that each new transportation plan must be demonstrated to conform to the Clean Air Act requirements before the transportation plan is approved by the MPO or accepted by U.S. DOT. The Public Review Draft Chugiak-Eagle River LRTP PM-10 Air Quality Conformity Determination document dated January 23, 2003, is intended to meet these requirements.

The Public Review Draft Chugiak-Eagle River LRTP PM-10 Air Quality Conformity Determination report concluded that the 2003 Update of the Chugiak-Eagle River Long-Range Transportation Plan is found to be in conformity with the Federal Clean Air Act as amended in 1990. Furthermore, it has been determined that the Chugiak-Eagle River Long-Range Transportation Plan will not undermine the ability of the Municipality of Anchorage to achieve compliance with the EPA carbon monoxide standards.