

**Technical Support for State and Tribal Air Quality
Fine Particle (PM_{2.5}) Designations**

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U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
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1.0 INTRODUCTION

This document contains factual and technical data in support of the U.S. Environmental Protection Agency's (EPA) designations of the fine particle nonattainment areas. Fine particles are those less than 2.5 micrometers in aerodynamic diameter and are also referred to as "PM2.5." Additional supporting information is contained in the EPA June 28 and June 29, 2004 response letters to the states and tribes. The June letters address where EPA agreed with the submitted recommendations and the cases where EPA made modifications to the states' and tribes' recommendations as authorized under the Clean Air Act (CAA).

This chapter presents an overview of the PM2.5 designations process. Chapter 2 contains two tables of EPA's nonattainment designations for PM2.5. Section 2.1 contains a table with nonattainment counties arranged alphabetically by state and then area name. Section 2.2 contains nonattainment counties arranged alphabetically by Region, state, and area name. Chapter 3 discusses the results and methodology for the urban excess calculation. Chapter 4 discusses weighted emissions scores methodology and results. Chapter 5 contains information on the nine-factor analysis methodology. Chapter 6 contains the results of the nine-factor analyses for individual nonattainment areas sorted by EPA Region and state. Chapter 7 contains maps, wind roses, and other documentation to support EPA's designations.

1.1 Background

The CAA establishes a process for air quality management through the national ambient air quality standards (NAAQS). Area designations are required after promulgation of a new or revised NAAQS. After evaluating numerous health studies and conducting an extensive peer review process, on July 18, 1997, EPA promulgated a PM2.5 standard of 15 micrograms per cubic meter, based on the 3-year average of annual mean PM2.5 concentrations. The 24-hour standard for PM2.5 is 65 micrograms per cubic meter, determined by the 3-year average of the annual 98th percentile concentrations. The CAA and the Transportation Equity Act for the 21st Century (TEA-21) required EPA to designate all PM2.5 nonattainment areas by July 2000. However, a number of events delayed the implementation of the PM2.5 standard. TEA-21 revised the deadline to publish nonattainment designations in order to provide additional time to collect three years of air quality monitoring data. Additionally, the 1977 NAAQS rule was challenged by the American Trucking Association, the U.S. Chamber of Commerce and other state and business groups. See *American Trucking Assoc. v. EPA*, 175 F.3d 1027, 1047-48, on rehearing 195 F.3d 4 (D.C. Cir. 1999). In February 2001, the Supreme Court upheld EPA's authority under the CAA to set NAAQS that protect the American public from harmful effects of air pollution. The Supreme Court remanded the case to the D.C. Court of Appeals for disposition of issues the Court did not address in its initial decision. See *Whitman v. American Trucking Assoc.*, 121 S.Ct. 903, 911-914, 916-919 (2001) (Whitman). In March 2002, the D.C. Circuit rejected all remaining legal challenges to the PM2.5 standard. See *American Trucking Assoc. v. EPA*, 283 F.3d 355 (D.C. Cir. 2002) (ATA III).

1.2 Correspondence with States and Tribes

Section 107(d) of the CAA defines a nonattainment area as “any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.” In February and April 2003, EPA provided guidelines to states and tribes for recommending nonattainment area boundaries for the PM_{2.5} standard. The guidance instructed states and tribes to begin their analysis of attainment and nonattainment area boundaries based on the boundaries of metropolitan areas. The guidance also instructed states to include in the nonattainment areas any nearby counties contributing to fine particle pollution in those metropolitan areas. EPA also recommended that states and tribes use common boundaries for areas to be designated as nonattainment for both PM_{2.5} and the 8-hour ozone standards in order to facilitate future planning and implementation activities. EPA listed nine factors for states and tribes to consider as they developed their boundary recommendations. Chapter 5 contains a detailed discussion of these factors and the analysis methodology. States and tribes made their initial recommendation of nonattainment area designations to EPA in February 2004.

As stated above, in accordance with the CAA, EPA carefully reviewed the state and tribal recommended designations and accompanying documentation to determine where modifications needed to be made as deemed necessary in light of the CAA definition of nonattainment. On June 28 and 29, 2004 EPA responded to the states’ and the tribes’ recommendations by notifying them regarding where EPA agreed or disagreed with their recommendations. Following the June letters, some states and tribes submitted follow-up data to support their original recommendations. EPA has carefully reviewed all of the requests and the data submitted throughout the designations process. This document contains the technical information and rationale supporting EPA decisions to designate and classify areas for the PM_{2.5} NAAQS.