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# MEETING NOTICE AND AGENDA

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## SAN DIEGO CONFORMITY WORKING GROUP

The San Diego Conformity Working Group may take action on any item appearing on this agenda.

Wednesday, February 16, 2005

10 a.m. to 11:30 a.m.

SANDAG, Conference Room 8B  
 401 B Street, Suite 800  
 San Diego, CA 92101-4231

Staff Contact: Elisa Arias  
 (619) 699-1936  
 ear@sandag.org

***Please contact Elisa Arias prior to the meeting if you wish to participate by conference call.***

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# SAN DIEGO CONFORMITY WORKING GROUP (CWG)

Wednesday, February 16, 2005

10 a.m. to 11:30 a.m.

ITEM #		ACTION
1.	<b>Introductions</b>	
+2.	<b>Summary of December 15, 2004 Meeting</b>	INFORMATION
3.	<b>Public Comments/Communications</b>	
4.	<b>2030 Regional Transportation Plan (RTP) Amendment No. 1</b> On January 28, 2005, the SANDAG Board of Directors held a Public Hearing to receive comments on the 2030 RTP Amendment No. 1. The Board also made a finding of conformity and adopted the amended Plan. The air quality conformity determination has been submitted to the U.S. Department of Transportation (DOT) requesting DOT's conformity finding.	INFORMATION
5.	<b>Carbon Monoxide (CO) Maintenance Plan</b> Staff from the U.S. Environmental Protection Agency (EPA) will provide an update on the adequacy review of CO emissions budgets.	INFORMATION
+6.	<b>8-Hour Ozone Standard: Conformity Determination of the 2030 Revenue Constrained RTP and 2004 Regional Transportation Improvement Program (RTIP)</b> The draft air quality analysis for the 8-Hour ozone standard of the 2030 Revenue Constrained RTP and 2004 RTIP, as amended, was released on January 18, 2005 for a 30-day review and comment period. The CWG will be asked to provide comments on the draft analysis at the meeting. Written comments are due to SANDAG by February 18, 2005.  On March 4, 2005, the Transportation Committee will be asked to authorize distribution of the draft air quality conformity determination for a 30-day public review and comment period.	REVIEW AND COMMENT
+7.	<b>Fine Particles Standard Designation</b> On January 5, 2005, the U.S. EPA designated the San Diego air basin as non-attainment for the PM2.5 standard based on monitoring data for the period 2001-2003. This designation becomes effective on April 5, 2005. The following tribal lands are excluded from the non-attainment designation: La Posta Areas #1 and #2, Cuyapaipe Area, Manzanita Area, Campo Areas #1 and #2.  Staff from the San Diego Air Pollution Control District will update the CWG on PM2.5 data for 2004.	INFORMATION
8.	<b>Other Business</b>	

+ next to agenda item indicates an attachment

The next meeting of the San Diego Region Conformity Working Group is scheduled on Wednesday, March 16, 2005, from 10:00 a.m. to 11:30 a.m. at SANDAG.

February 16, 2005

TO: San Diego Region Conformity Working Group  
FROM: SANDAG Staff  
SUBJECT: Summary of December 15, 2004 Meeting  
ACTION: INFORMATION

**Item #1: Introductions**

Self-introductions were made. See attached attendance list.

**Item #2: Summary of November 17, 2004 Meeting**

There were no comments or corrections.

**Item #3: Public Comments/Communications**

There were none.

**Item #4: 2004 Regional Transportation Improvement Program (RTIP) Amendment No. 1**

Ms. Elisa Arias, SANDAG, reported that shortly after the agenda for this meeting was mailed out SANDAG received the approval to Amendment No. 1 from FHWA/FTA. Mr. Steve Luxenberg, FHWA pointed out there were two separate letters one for the RTIP amendment and another for the conformity determination.

**Item #5: 2030 Regional Transportation Plan (RTP) Amendment No. 1:**

Ms. Arias reviewed the schedule for the RTP amendment and noted one correction: the public hearing will be held at the January 28, 2005 SANDAG Board of Directors' meeting instead than at the January 21, 2005 Transportation Committee meeting as previously reported. No public comments have been received (aside from the items discussed at the November 2004 CWG meeting).

**Item #6: 8-Hour Ozone Standard: Conformity Redetermination of the 2030 Revenue Constrained RTP and 2004 RTIP**

Ms. Arias referred to page seven of the agenda, which outlines the proposed schedule and conformity criteria and procedures to redetermine conformity of the 2030 Revenue Constrained RTP and 2004 RTIP to the 8-Hour ozone standard.

Mr. Carl Selnick, APCD, asked if SANDAG considered conducting the conformity determination for PM2.5 concurrently. It was pointed out that EPA has not published the PM 2.5 designations and as a result, it is unknown what analyses need to be done.

Mr. Luxenberg asked when EPA plans to find the recently submitted CO Maintenance Plan budgets adequate and perhaps SANDAG can redetermine conformity to the new CO budgets concurrently with the 8-hour ozone determination. Discussion ensued regarding some of the scheduling conflicts

depending on when certain budgets were found adequate since the region must determine conformity to the 8-hour ozone standard no later than June 15, 2005.

Mr. Luxenberg asked about adding 2018 as a CO analysis year. It was agreed that when SANDAG redetermines conformity to the new CO budgets, 2018 would be evaluated and projected emissions for 2018 would be interpolated.

**Item #7: EMFAC Emissions Model Updates**

Mr. Wade reviewed the planning milestones included in the agenda item. Ms. Arias reported that SANDAG has already submitted the travel activity data requested by ARB.

**Item #8: State Implementation Plan (SIP) Development**

Ms. Arias reported that the scheduled December 14, 2004 working group meeting was cancelled.

**Item #9: Other Business**

Mr. Mike Brady, Caltrans, reminded the working group that the next statewide CWG meeting is scheduled for January 27, 2005 at SANDAG. Agenda should be submitted to him.

**San Diego Region Conformity Working Group**  
Meeting Attendance  
December 15, 2004

<b>Name</b>	<b>Agency</b>
Carl Selnick	San Diego Air Pollution Control District
Mike Brady (phone)	Caltrans Headquarters
Carla Walecka (phone)	Transportation Corridor Agencies
Toby Tiktinsky (phone)	U.S. Environmental Protection Agency
Steve Luxenberg/Wade Hobbs	Federal Highway Administration
Dennis Wade	California Air Resources Board
Cathy Gomes	Caltrans Federal Programming
Sookyung Kim	SANDAG
Elisa Arias	SANDAG

## **AIR QUALITY PLANNING AND TRANSPORTATION CONFORMITY: 8-HOUR OZONE STANDARD**

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### **Background**

The federal Clean Air Act (CAA), which was last amended in 1990, requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. California has adopted state air quality standards that are more stringent than the NAAQS. Areas with levels that exceed the standard for specified pollutants are designated as non-attainment areas.

The EPA requires that each state containing non-attainment areas develop plans to attain the NAAQS by a specified attainment deadline. These attainment plans are called State Implementation Plans. The San Diego County Air Pollution Control District (APCD) prepares the San Diego portion of the California State Implementation Plan (SIP). Once the standards are attained, further plans – called Maintenance Plans – are required to demonstrate continued maintenance of the NAAQS.

The U.S. EPA has added two new standards to protect public health: measuring ozone levels over eight-hour periods and measuring smaller particulate matter (PM) in the air. The more stringent 8-Hour ozone standard will protect the public against longer exposure periods. The new fine particulate matter standard (PM<sub>2.5</sub>) will focus more protection against smaller particles, which pose an increased health risk.

On April 15, 2004, the U.S. EPA designated the San Diego air basin as non-attainment for the 8-Hour ozone standard. The air basin has been classified as a Basic non-attainment area under Subpart 1 of the Clean Air Act and the attainment date for the 8-Hour Ozone standard is June 15, 2009. This designation took effect on June 15, 2004. Several areas that are tribal lands in eastern San Diego County were excluded from the non-attainment designation. As shown in Attachment 1, on page 13, La Posta Areas #1 and #2, Cuyapaipe, Manzanita, and Campo Areas #1 and #2 are attainment areas for the 8-Hour Ozone NAAQS.

In cooperation with the San Diego APCD and SANDAG, the California Air Resources Board (ARB) must develop an 8-Hour Ozone Attainment Plan for submission to the U.S. EPA as a SIP revision by June 15, 2007.

Published in the Federal Register on July 1, 2004, the *Final Transportation Conformity Rule Amendments for the New 8-hour Ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards* requires that conformity of the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) for nonattainment areas be determined to the 8-Hour ozone standard by June 15, 2005. Both SANDAG, as the Metropolitan Planning Organization, and the U.S. Department of Transportation (DOT) must make the conformity determination by that date to avoid a lapse.

The San Diego region attained the federal 1-Hour ozone standard in 2001. The U.S. EPA redesignated the San Diego air basin as attainment/maintenance and approved the 1-Hour Ozone Maintenance Plan as a SIP revision, effective on July 28, 2003. EPA will revoke the federal 1-Hour ozone standard one year after the effective date of the 8-hour standard designation or on June 15, 2005.

The San Diego region also has been designated by the U.S. EPA as a federal maintenance area for the Carbon Monoxide (CO) standard. On November 8, 2004, ARB submitted the *2004 Revision to the California State Implementation Plan for Carbon Monoxide* to the U.S. EPA for approval. The 2030 Revenue Constrained RTP

and the 2004 RTIP, as amended, also will be redetermined to the new CO budget included in the Plan if the U.S. EPA makes an adequacy finding of this budget prior to the date the SANDAG Board of Directors' makes its conformity determination to the 8-Hour ozone standard. The Board will be asked to take this action at its meeting on April 22, 2005.

Most recently, on December 17, 2004, the U.S. EPA designated the San Diego region as a non-attainment area for PM2.5. The effective date of this designation is April 5, 2005. Conformity of plans and programs to the PM2.5 standard must be determined by April 6, 2006. The U.S. EPA is expected to publish a rule to establish planning and control requirements that apply to nonattainment areas for the PM2.5 standard in February 2005.

## **Transportation Conformity: Regional Emissions Analysis & Modeling Procedures**

### *Introduction*

The 2030 RTP, as amended, includes policies and programs to improve mobility in the San Diego region to the year 2030. The RTP contains three long-range plans based on funding scenarios. Besides the 2030 Mobility Plan, which is based on reasonably expected transportation funding and the Unconstrained Revenue Plan, SANDAG developed a 2030 Revenue Constrained Plan for conducting the air quality conformity analysis.<sup>1</sup> Appendix A of the 2030 RTP Amendment No. 1 describes the Revenue Constrained Plan and Chapter 4 of the 2030 RTP provides information on revenue assumptions.

As explained in the Background section of this Appendix, SANDAG and the U.S. DOT must make a determination that the Revenue Constrained Plan conforms to the SIP for air quality. Conformity to the SIP means that transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of the national ambient air quality standards.

DOT made the conformity determination for the 2030 RTP on April 9, 2003 and found the 2004 RTIP in conformity with the SIP on October 4, 2004. SANDAG is currently processing Amendment No. 1 to the 2030 RTP and Amendment No. 2 to the 2004 RTIP. The SANDAG Board of Directors will be asked to make a finding of conformity of Amendment No. 1 of the 2030 Revenue Constrained Plan and Amendment No. 2 of the 2004 RTIP, and to adopt Amendment No. 1 of the 2030 RTP on January 28, 2005.

The air quality conformity analysis of the 2030 Revenue Constrained RTP and 2004 RTIP for the 8-Hour ozone standard is based on the amended RTP and RTIP.

### *Growth Forecasts*

Every three to five years, SANDAG produces a long-range forecast of population, housing, and employment growth for the San Diego region. The most recent is the Final 2030 Cities/County Forecast, which was accepted by the SANDAG Board of Directors on December 19, 2003 for use in planning studies.

The forecast process relies on three integrated forecasting models. The first one, the Demographic and Economic Forecasting Model (DEFM), provides a detailed econometric and demographic forecast for the entire region. The second one, the Interregional Commuting Model, provides a forecast of commuting between the San Diego region, southwest Riverside County, and Tijuana/Northern Baja California. The third

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<sup>1</sup> Consistent with 23 CFR 450, the *2030 Revenue Constrained Transportation Plan* includes only those facilities and programs that could be funded with existing state and federal programs and with the current *TransNet* local sales tax program, which expires in 2008. A 40-year extension of the TransNet local sales tax was approved by the voters in November 2004. The next update of the 2030 Revenue Constrained RTP will reflect TransNet revenues beyond 2008.

one, the Urban Development Model, allocates the results of the first two models to subregional areas based upon the current plans and policies of the jurisdictions.

The Final 2030 Cities/County Forecast is based solely on the general and community plans of the 18 cities as adopted. For the unincorporated area, the forecast is based on the most recent (December 2002) version of the County’s GP2020 plan update, as directed by the Board of Supervisors.

In December 2004, SANDAG consulted with the San Diego Region Conformity Working Group (CWG) on the use of the Final 2030 Cities/County Forecast for the air quality conformity analysis of the 2030 RTP and 2004 RTIP to the 8-Hour ozone standard. Both U.S. DOT and U.S. EPA have concurred that approved plans should be used as input in the air quality conformity process. Table C.1 shows the regional population and employment growth forecast for the San Diego region through 2030.

**TABLE C.1—SAN DIEGO REGIONAL POPULATION AND EMPLOYMENT FORECAST**

<b>Final 2030 Cities/County Forecast</b>		
<b>Year</b>	<b>Total Population</b>	<b>Total Employment</b>
2000	2,813,833	1,384,676
2010	3,211,721	1,528,522
2020	3,528,605	1,672,883
2030	3,855,085	1,824,030

Source: SANDAG, 2003

### **Transportation Modeling**

SANDAG follows a widely used four-step transportation modeling process to forecast travel activity in the San Diego region. Travel forecasting procedures are described in more detail in SANDAG’s *Regional Transportation Models* (1995) and the *Preliminary 2030 Forecast Process and Model Documentation* (April 2003), which are available upon request.

The estimates of regional transportation-related emissions analysis meet the requirements established in the Transportation Conformity Rule, Sections 93.122(b) and 93.122(c). These requirements relate to the procedures to determine regional transportation-related emissions, including the use of network-based travel models, methods to estimate traffic speeds and delays, and the estimation of vehicle miles of travel.

Tranplan is the transportation planning computer package used to forecast travel activity utilizing datasets that are maintained in the geographic information system (GIS). The transportation modeling steps consist of:

1. Generating average weekday person trip ends in each zone,
2. Estimating trip movements between zones using a trip distribution model,
3. Allocating trips to different forms of transportation using a mode split model, and
4. Assigning vehicle trips to road segments using a traffic assignment model.

Two iterations through the modeling process are made to reach equilibrium between transportation facilities and demand, where congested travel times from the first iteration are input to the second iteration.

The transportation models require two major inputs. One input is a zonal level households and land use forecast, which determines the number of trips generated. Highway and transit system networks are the other key input that affects the amount and location of vehicular travel.

## **Highway Networks**

The regional highway networks in the 2030 RTP include all roads classified by local jurisdictions in their circulation elements. These roads include freeways, expressways, and the Regional Arterial System (RAS). The RAS consists of all conventional state highways, prime arterials, and selected major streets. In addition, some local streets are included in the networks for connectivity between zones.

The route improvements and additions in the 2030 RTP are developed as an integral part of San Diego's regional growth management and forecasting process. They are intended to provide adequate travel service that is compatible with adopted regional policies for land use and population growth. All regionally significant projects from the 2030 Revenue Constrained RTP are included in the quantitative emissions analysis. These include all state highways, all proposed National Highway System routes, all regionally significant arterials, and all FHWA functionally classified "Other Principal Arterials."

The networks also account for programs intended to improve the operation of the highway system, including high occupancy vehicle (HOV) lanes and ramp metering. Existing and proposed toll facilities also are modeled to reflect time, cost, and capacity effects of these facilities. The SR 125 South project and SR 241 are the only modeled toll facilities in the San Diego region.

In addition, several managed/HOV lanes are included in the Revenue Constrained Plan. Facilities with proposed managed lanes include I-5, I-15, I-805, and SR 52. It is assumed that the excess capacity not utilized by carpools and transit on HOV routes with two or more lanes in the peak direction as well as reversible HOV routes would be managed so that single occupant vehicles could use these lanes under a pricing mechanism. Traffic flows would be managed so that the facility would operate at level of service C or better.

Based on the networks and programs described above, the 2030 RTP transportation forecasts differentiate between single occupant and multioccupancy or high occupancy vehicle travel times.

SANDAG normally maintains networks for 2000 (the 2030 Cities/County Forecast base year) and the years 2010, 2020, and 2030. A 2014 network also was created to conduct air quality conformity analyses of the 2030 Revenue Constrained RTP to the 2014 1-Hour ozone emissions budgets. Additionally, a base year 2002 network and a 2009 network were created to conduct the interim emissions test for the 8Hour ozone standard attainment year.

Appendix A lists the major highway projects included in the analysis. Locally funded regionally significant projects also have been included in the air quality conformity analysis. These projects are funded with TransNet funds, a 20-year half-percent local sales tax for transportation that expires in 2008, and other local revenue sources.

## **Transit Networks**

SANDAG also maintains transit network datasets for existing and proposed transit systems. Bus speeds assumed in the transit networks are derived from modeled highway speeds and reflect the effects of congestion. Regional and express transit routes on surface streets are assumed to operate out of congestion due to priority transit treatments. Higher bus speeds may result for transit vehicles operating on highways

with HOV lanes and HOV bypass lanes at ramp meters, compared to those routes that operate on highways where these facilities do not exist.

Transit fares are an output of the transit network procedures, which replicate complex fare policies that differ between:

1. Buses which collect a flat fare of between \$1.50 and \$3.00 depending on the type of service,
2. Trolleys which charge a variable fare of between \$1.25 and \$2.50 depending on how many stations are traversed,
3. Commuter rail which has a zone-based fare of between \$3.50 and \$4.65,
4. Regional Bus Rapid Transit (BRT) which is assumed to charge a distance-based fare of between \$0.14 and \$0.60 per miles that replicates limited express and commuter rail fares, and
5. Corridor BRT, which is assumed to use trolley station-based fares.

Fares are assumed to remain constant in real dollars over the forecast period.

Locally funded regionally significant transit projects have been included in the air quality conformity analysis of the 2030 RTP. These transit projects also are funded with *TransNet* funds or other local revenue sources. Once network coding is completed, the transportation models are run for the applicable scenarios (2002, 2009, 2010, 2014, 2020, and 2030). Appendix A lists the major regional transit projects included in the analysis.

## **Trip Generation**

Trip generation is the first step in the transportation modeling process. Average weekday trip ends by all forms of transportation starting and ending in each zone are estimated for ten trip types: home-work, home-college, home-school, home-shop, home-other, work-other, and other-other, serve passenger, visitor, and airport.

The trip generation model works by applying trip rates to zone level growth forecasts. Trip production rates are expressed as trips per household. Trip production rates vary by trip type and structure type. Trip attractions are expressed as trips per acre of nonresidential land use or trips per household. Trip attraction rates vary by trip type and land use category. The Final 2030 Cities/County Forecast was used to produce trip generation forecasts for the years 2002, 2009, 2010, 2014, 2020, and 2030.

In recent years, urban planners have engaged in a debate about whether increasing highway capacity generates induced travel. Most opinions revolve around the following ideas:

- Households will make new trips because adding highway capacity reduces the cost or time spent traveling to a location. However, travel costs or travel times will ultimately increase over time as more vehicles use a facility and the new road begins to experience congestion.
- New facilities may cause a diversion of existing trips from more congested roads to less congested ones. New land uses along a corridor also may result in redistribution of trips to a new destination using an alternative route, but do not necessarily cause more trips overall.

SANDAG's regional transportation model uses a relatively high trip generation rate for households (8.1 vehicle trips per day), which may account for possible increases in trip making as new facilities are built. Also, the model accounts for travel diversion among facilities.

## **Trip Distribution**

After trip generation, trip movements between zones are determined using a trip distribution gravity model. Inputs to the trip distribution model include zone level trip generation forecasts by trip type, zone-to-zone travel times, and friction factors by trip type.

Travel times are based on the 2030 RTP network scenarios. Highway improvements may induce longer trip lengths by allowing motorists to travel farther in the same amount of time. This effect is represented with the trip distribution model. Travel times differ between initial and final model iterations. Initial travel times reflect free-flow conditions, and final times reflect the effects of congestion.

## **Mode Choice**

At this point in the modeling process, total person trip movements between zones are split into different forms of transportation: drive alone, 2-person carpools, 3+ person carpools, transit, and other (bicycling and walk). Trips between zone pairs are allocated to modes based on the cost and time of traveling by a particular mode compared to the cost and time of traveling by other modes. For example, vehicle trips on a congested route would be more likely to be diverted to light rail than vehicle trips on an uncongested freeway.

Income level also is considered since surveys show that high-income travelers are more concerned about the level of service offered by a mode than those with lower incomes. The mode choice model is calibrated using 1995 Travel Behavior Survey trip tables by mode and income and 1995 Regional Transit Survey transit trip characteristics. Preliminary Census 2000 journey-to-work data and 2000 onboard transit passenger counts also are used in the calibration process.

A number of data files are input to the mode choice model. These include:

- Zonal incomes
- Trip tables from the distribution model
- Peak and off-peak period highway times
- Peak period HOV times
- Peak and off-peak period transit times
- Transit fares
- Auto driving and parking costs
- Transit accessibility measures

Highway and transit travel time datasets differ between initial and final passes through the modeling process. Final iteration times reflect congestion effects identified in the first iteration.

The model produces a.m. peak, p.m. peak, and off-peak period trip tables for vehicles and transit riders. The a.m. peak period is from 6:00 to 9:00 in the morning and the p.m. peak period is from 3:00 to 6:00 in the afternoon. The off-peak period covers the remaining 18 hours of the day. A series of mode choice model runs were performed in the course of analyzing the 2030 RTP scenarios through two model iterations.

## **Highway Assignment**

Highway assignment produces traffic volume estimates for all roadway segments in the system. These traffic volumes are an important input to emissions modeling.

The highway assignment model works by finding roads that provide the shortest travel time between each zone pair. Trips between zone pairs are then accumulated on road segments making up minimum paths. Highway travel times consider posted speed limits, signal delays, and congestion delays. The model computes congestion delays for each segment based on the ratio of the traffic volume to roadway capacity. Four iterations of equilibrium assignment and capacity restraint are performed within each assignment model run.

Motorists may choose different paths during peak hours when congestion can be heavy and off-peak hours when roadways are typically free flowing. For this reason, traffic is assigned separately for a.m. peak, p.m. peak, and off-peak periods.

Vehicle trip tables for each scenario reflect increased trip-making due to population growth and variations in travel patterns due to the alternative transportation facilities/networks proposed.

Model accuracy is assessed by comparing model estimated 2000 traffic volumes with actual traffic counts obtained through SANDAG's traffic monitoring program and Highway Performance Monitoring System (HPMS) estimates of vehicle miles of travel (VMT).

### **Post-Tranplan Processing**

Standard Tranplan output needs to be reformatted and adjusted to be useful for emissions modeling. Several routines and computer programs have been written to accomplish the following major functions:

- Correcting link specific traffic volume forecasts for calibration error
- Adding in estimated travel on roads not in the transportation modeling process
- Computing link speeds based on corrected link volumes, Highway Capacity Manual relationships between congestion and speed (or signal delay)
- Splitting link volumes into heavy-duty truck and other traffic to obtain speed distributions by vehicle class
- Preparing a data set that contains total VMT, number of trip starts, and VMT by speed category by time of day for each vehicle class

Post-Tranplan processing routines are performed twice. First, they are run after the initial model iteration to provide travel times for the final model iterations. Second, they are performed on the final model assignments to provide inputs for emissions modeling.

### **Motor Vehicle Emissions Modeling**

#### *Emissions Model*

In October 2002, ARB released EMFAC 2002, an emissions inventory model that calculates emissions for motor vehicles operating in California. It is an integrated model that combines emission rate data with vehicle activity to calculate regional emissions. EPA approved EMFAC 2002 for use in conformity determinations on April 1, 2003.

The EMFAC 2002 model supports calculation of emissions for the Burden mode. The Burden mode is used for calculating regional emission inventories. In this mode, the model reports total emissions as tons per day for each pollutant, by vehicle class and the total vehicle fleet. The Burden mode uses emission factors that have been corrected for ambient conditions and speeds combined with vehicle activity to calculate emissions in tons per day. Vehicle activity includes the number of vehicles, daily vehicle miles traveled, and the number of daily trips.

The air quality analysis of the 2030 Revenue Constrained RTP for the 8-Hour ozone standard was conducted using EMFAC 2002's Burden mode. Projections of daily regional emissions were prepared for reactive organic gases (ROG), nitrogen oxides (NOx), and carbon monoxide (CO).

On-road motor vehicle emissions are attributed to several different processes:

- Starting exhaust
- Running exhaust
- Idle exhaust (calculated for heavy-duty trucks only)
- Resting and diurnal evaporation
- Running losses
- Hot soak evaporation

Emission factors vary by vehicle class, fuel usage, and technology. Thirteen vehicle classes are modeled: passenger car, two types of light-duty trucks, medium-duty truck, two types of light-heavy-duty trucks, medium-heavy-duty truck, heavy-heavy-duty truck, line-haul vehicle, urban bus, school bus, motorcycle, and motor-home. The fuels modeled are gasoline, diesel, and electrically powered vehicles. Technology categories can be grouped into catalyst, noncatalyst, and diesel.

Emission factors for processes that vary by temperature (i.e., starting exhaust, hot soak, and running exhaust) are broken down further by specified temperature ranges. Exhaust emission factors also are broken down by speed range.

## **Regional Emissions Forecasts**

Regional transportation forecasts were initiated in December 2004. Output from the Tranplan model was then reformatted and adjusted to be useful for emissions modeling.

### *8-Hour Ozone Standard*

The transportation conformity rule prescribes different conformity tests for 8-Hour ozone areas that have 1-Hour Ozone State Implementation Plan (SIP) budgets and for areas that do not have 1-Hour Ozone SIPs. The San Diego 1-Hour Ozone Maintenance Plan established ROG and NOx budgets for 2010 and 2014, but not for 2009. On June 26, 2003, EPA approved the Maintenance Plan and motor vehicle emissions budgets as SIP revisions. These SIP revisions became effective on July 28, 2003.

In August 2004, SANDAG consulted with the CWG on various options for interim emissions analysis. The approach agreed by the CWG is described below:

- Under the new 8-hour ozone standard, the San Diego air basin falls under Boundary Scenario 2, where the 8-Hour ozone area is smaller than and within the 1-Hour ozone boundary. Attachment 1, on page 13, shows the Eastern San Diego County attainment areas, which are tribal lands (Cuyapaibe, La Posta # 1 and #2, Campo # 1 and #2, and Manzanita). The CWG agreed to use the existing approved budget for the entire 1-Hour ozone nonattainment area for the analysis years for which 1-Hour ozone budgets are available (2010 and 2014) and for the remaining analysis years (2020 and 2030).
- To conduct the interim emissions test for 2009, the CWG agreed to use the no-greater-than-2002 test for the attainment year 2009.

Therefore, countywide forecasts of average weekday ROG and NOx emissions were produced for 2002, 2009, 2010, 2014, 2020, and 2030 using the EMFAC 2002 model. ROG and NOx emissions are based on the summer season.

The analysis years were selected to comply with Sections 93.106(a) (1) and 93.118 (a) of the Transportation Conformity Rule. According to these sections, the first horizon year (2010) must be within ten years from the base year used to validate the regional transportation model (2000), the last horizon year must be the last year of the transportation plan's forecast period (2030), and the horizon years may be no more than ten years apart (2020). In addition, as explained above, the interim regional emissions analysis for the 8-Hour ozone standard must be conducted for the emissions budgets in the applicable SIP (ROG and NOx budgets for 2010 and 2014). Finally, emissions forecasts for 2002 and 2009 were prepared to conduct the interim attainment year 2009 test.

### *CO Standard*

CO regional emissions were prepared for 2010, 2018, 2020, and 2030, in anticipation of the U.S. EPA's adequacy finding of the 2003 CO budget included in the *2004 Revision to the California State Implementation Plan for Carbon Monoxide*. CO emissions are based on the winter season.

These analysis years also were selected to comply with Sections 93.106(a) (1) and 93.118 (a) of the Transportation Conformity Rule. The first horizon year (2010) is within ten years from the base year used to validate the regional transportation model (2000), the last horizon year is the last year of the transportation plan's forecast period (2030). The intermediate horizon year is no more than ten years apart (2020). In addition, CO emissions projections were prepared for 2018 to demonstrate that the San Diego region will remain in attainment for the full 20-year period from the date of redesignation to attainment (1998).

### *Emissions Modeling Results*

An emissions budget is the part of the SIP that identifies emissions levels necessary for meeting emissions reduction milestones, attainment, or maintenance demonstrations.

To determine conformity of the 2030 RTP and the 2004 RTIP to the 8-Hour ozone standard, the plan and the program must comply with the interim emission analysis described in the Regional Emissions Forecast section.

Table C.2 summarizes the 2030 Revenue Constrained RTP and 2004 RTIP air quality conformity analysis and interim emissions analysis for the 8-Hour ozone standard. This analysis shows that both the 2030 Revenue Constrained RTP and the 2004 RTIP (including interim years) meet the applicable budgets and interim tests. Projected ROG and NOx emissions for 2009 are lower than the base year 2002 and those for 2010, 2014, 2020, and 2030 are below the SIP budgets for 2010 and 2014.

**TABLE C.2—2030 SAN DIEGO REVENUE CONSTRAINED PLAN & 2004 RTIP  
AIR QUALITY CONFORMITY ANALYSIS FOR 8-HOUR OZONE**

Year	Average Weekday Vehicle Starts (1,000s)	Average Weekday Vehicle Miles (1,000s)	ROG		NOx	
			SIP Emissions Budget Tons/Day	ROG Emissions Tons/Day	SIP Emissions Budget Tons/Day	NOx Emissions Tons/Day
2002	14,217	79,045	---	76	---	135
2009	15,125	82,651	---	44	---	84
2010	15,242	83,032	46	43	88	80
2014	15,789	86,912	36	33	66	58
2020	16,784	93,281	36	26	66	40
2030	18,383	104,922	36	18	66	24

Pending the U.S. EPA’s finding of adequacy of the CO budget for the San Diego air basin included in the 2004 CO Maintenance Plan update, Table C. 3 shows that projected CO emissions from the 2030 RTP and 2004 RTIP, as amended, are below the 2003 CO budget. Regional emissions for 2018 were interpolated between 2010 and 2020 emissions projections. Once the U.S. EPA issues a budget adequacy finding, the CO budget contained in the Maintenance Plan update will become the applicable budget for conformity determinations for 2003 and subsequent years.

**TABLE C.3—2030 SAN DIEGO REVENUE CONSTRAINED PLAN & 2004 RTIP  
AIR QUALITY CONFORMITY ANALYSIS FOR CARBON MONOXIDE**

Year	Average Weekday Vehicle Starts (1,000s)	Average Weekday Vehicle Miles (1,000s)	CO	
			SIP Emissions Budget Tons/Day	CO Emissions Tons/Day
2010	15,242	83,032	730	423
2018	16,476	91,231	730	260
2020	16,784	93,281	730	219
2030	18,383	104,922	730	142

**Exempt Projects**

Section 93.126 of the Transportation Conformity Rule exempts certain highway and transit projects from the requirement to determine conformity. The categories of exempt projects include safety, mass transit, air quality (ridesharing and bicycle and pedestrian facilities), and other (such as planning studies).

Table C.4 illustrates the exempt projects considered in the 2030 Revenue Constrained Plan. This table shows short-term exempt projects. Additional unidentified projects could be funded with revenues expected to be available from the continuation of existing state and federal programs.

**TABLE C.4—EXEMPT PROJECTS**

<i>Project/Program Description</i>
<i>Bikeway, Rail Trail and Pedestrian Projects</i>
<i>Camino Del Mar/Jimmy Durante Blvd. Bicycle Bridge</i>
<i>Cliff Street Pedestrian Overcrossing</i>
<i>Coastal Rail Trail</i>
<i>Escondido Creek Bike Path Phases 4 &amp; 5</i>
<i>Escondido Creek Bike Path Undercrossings</i>
<i>Inland Rail Trail Phase 2</i>
<i>Lake Hodges Bicycle-Pedestrian Bridge Approach Improvements</i>
<i>Lake Hodges Bicycle-Pedestrian Bridge</i>
<i>Pacific Highway/Barnett Interchange Improvements</i>
<i>Rosa Street Pedestrian Overcrossing</i>
<i>Rose Creek Bicycle Bridge</i>
<i>San Diego River Bikeway</i>
<i>SR 56 Bike Path Interchanges</i>
<i>Sweetwater River Bike Path</i>
<i>Via de la Valle Bikeways</i>
<i>Regionwide Traffic Incident Management</i>
<i>Freeway Service Patrol</i>
<i>Transportation Demand Management</i>
<i>RideLink Regional Rideshare Program</i>
<i>Regional Vanpool Program</i>
<i>Transportation Management Systems</i>
<i>Automated Traveler Information System</i>
<i>Traffic Management System (I-805, SR 94)</i>
<i>Fiber Optic/Closed Circuit Camera (I-8/15/805)</i>
<i>Ramp Meters (I-5/805, SR 94)</i>
<i>Traffic Monitoring Stations (I-5/805, SR 94)</i>
<i>Other traffic management systems</i>

**Implementation of Transportation Control Measures**

There are four TCMs that must be implemented in San Diego, which the SIP refers to as Transportation Tactics. They include ridesharing, transit service improvements, traffic flow improvements, and bicycle facilities and programs.

These TCMs were established in the 1982 SIP, which identified general objectives and implementing actions for each tactic. No TCMs have been removed or substituted from the 1-Hour Ozone Maintenance Plan, which is the applicable SIP.

## **Interagency Consultation Process and Public Input**

The consultation process followed to prepare the air quality conformity analysis for the 2030 Revenue Constrained Plan complies with the San Diego Transportation Conformity Procedures adopted in July 1998. In turn, these procedures comply with federal requirements under 40 CFR 93. Interagency consultation involves SANDAG (as the MPO for San Diego County), the APCD, Caltrans, ARB, DOT, and EPA.

Consultation is a three-tier process that:

1. formulates and reviews drafts through a conformity working group,
2. provides local agencies and the public with opportunities for input through existing regional advisory committees and workshops, and
3. seeks comments from affected federal and state agencies through participation in the development of draft documents and circulation of supporting materials prior to formal adoption.

SANDAG consulted on the development of the air quality conformity analysis of the 2030 RTP and 2004 RTIP, as amended, at meetings of the San Diego Region Conformity Working Group (CWG), as follows:

- On August 18, 2004, the CWG discussed relevant sections of the Final Transportation Conformity Rule Amendments for the New 8-hour Ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards. Particularly, the CWG discussed the conformity grace period and revocation of the 1-Hour ozone standard, the initial 8-Hour ozone conformity determination, and regional conformity tests before 8-Hour Ozone SIP budgets are found adequate. The outcome of this discussion was reviewed at the September 22, 2004 meeting of the CWG.
- On December 15, 2004, SANDAG staff presented the schedule for the preparation of the conformity analysis and consulted on criteria and procedures for determining conformity. Items discussed included interim emissions analysis, the use of latest planning assumptions, implementation of TCMs, emissions model and budgets, as well as consultation and public involvement.

On January 18, 2005, SANDAG released the draft air quality conformity analysis for the 2030 RTP and 2004 RTIP, as amended, for a 30-day public review and comment period. On that date, it also was distributed to the San Diego Region CWG. The draft air quality analysis will be scheduled for discussion at the February 16, 2005 meeting of the San Diego Region CWG.

On March 4, 2005, the Transportation Committee will be asked to distribute the draft conformity analysis for a subsequent 30-day public review and comment period. The SANDAG Board of Directors will be asked to make a finding of conformity of the 2030 Revenue Constrained RTP and the 2004 RTIP, as amended, at its meeting on April 22, 2005. Members of the public are welcomed to provide comments at meetings of the San Diego Region CWG, the Transportation Committee, and the SANDAG Board of Directors.

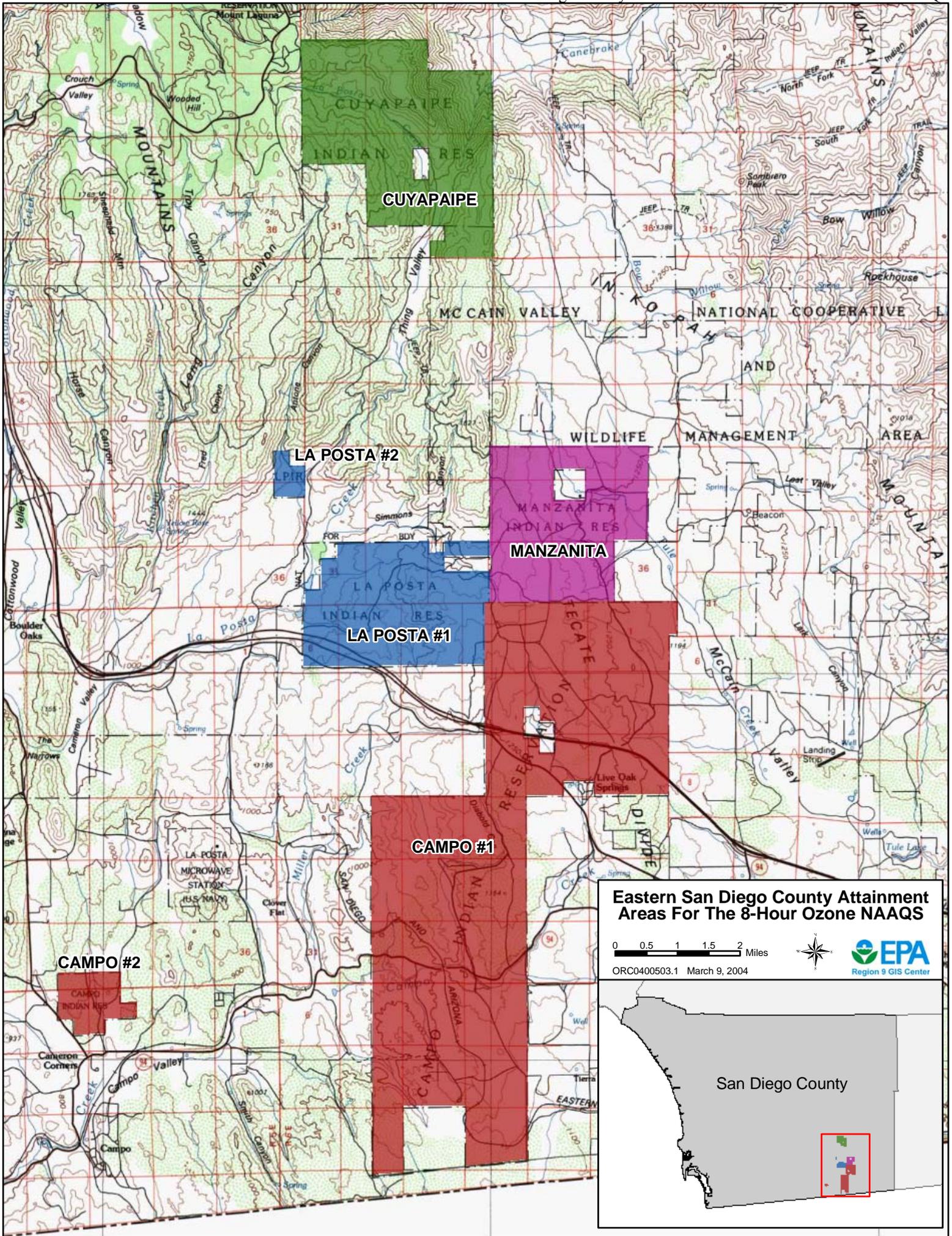


TABLE A.1—MAJOR CAPITAL IMPROVEMENTS – REVENUE CONSTRAINED PLAN

Transit Facilities		Cost (\$ millions)			
Mission Valley East Trolley Extension			\$450		
Oceanside to Escondido Rail			\$350		
Mid-Coast Light Rail			\$590		
Oceanside-Escondido Rail Double Tracking and North County Fair Extension			\$170		
Coastal Rail Double Tracking and Other Improvements*			\$420		
Coastal Rail Tunnel at Del Mar*			\$360		
Regional Light Rail Grade Separations			\$100		
Early Action Project Funding			\$80		
Improved/New Major Transit Stations and Centers			\$470		
Direct Access Ramps to Managed/HOV Lanes			\$480		
Vehicles for New Regional and Corridor Transit Services			\$260		
Arterial Transit Priority Improvements			\$100		
		Subtotal	\$3,830		
HOV and Managed Lane Facilities					
Freeway	From	To	Existing	Improvements	
I-5	I-805	SR 56	14F	14F + 4ML	\$30
I-5	SR 56	Vandegrift	8F	8F + 4ML	\$750
I-15	SR 94	SR163	6F/8F	8F + 2HOV	\$200
I-15	SR 163	SR 56	8F + 2ML (R)	8F + 4ML/MB	\$200
I-15	SR 56	Centre City Pkwy.	8F	8F + 4ML/MB	\$340
I-15	Centre City Pkwy.	SR 78	8F	8F + 4ML	\$120
SR 52	I-805	I-15	6F	6F + 2HOV	\$70
SR 52	I-15	SR 125	4F	6F + 2ML (R)	\$170
SR 54/SR 125	I-805	SR 94	6F/4F+2HOV	6F + 2HOV	\$90
SR 94	I-5	I-15	8F	8F + 2HOV	\$80
SR 241**	Orange County	I-5	---	8T	\$407
I-805	SR 905	SR 54	8F	8F + 2 HOV	\$150
I-805	SR 54	I-8	8F	8F + 4ML	\$450
I-805	Mission Valley Viaduct		8F	8F + 4ML	\$250
I-805	I-8	I-5	8F	8F + 4ML	\$380
				Subtotal	\$3,687
HOV Connectors					
Freeway	Intersecting Freeway		Movement		
I-5	I-805		North to North & South to South		\$180
I-15	SR 94		South to West & East to North		\$150
				Subtotal	\$330
Highway System Completion					
Freeway	From	To	Existing	Improvements	Cost (\$ millions)
I-5/I-805	Port of Entry – Mexico		---	Inspection Facility	\$20
SR 11	SR 905	Mexico	---	4F	\$190
SR 52	SR 125	SR 67	---	4F	\$290
SR 56	Camino Ruiz	Carmel Country	---	4F	\$130
SR 125**	SR 905	San Miguel Rd.	---	4T	\$400

**Appendix A**

<b>Highway System Completion (continued)</b>					<b>Cost (\$ millions)</b>
<b>Freeway</b>	<b>From</b>	<b>To</b>	<b>Existing</b>	<b>Improvements</b>	
SR 125	San Miguel Rd.	SR 54	---	4F	\$140
SR 125	Jamacha Road	SR 94	---	6F	\$170
SR 125	Navajo Road	Grossmont	---	6F	\$70
SR 905	I-805	Mexico	---	6F	\$290
Subtotal					<b>\$1,700</b>
<b>Highway Widening, Arterials, and Freeway Interchanges</b>					
<b>Routes</b>	<b>From</b>	<b>To</b>	<b>Existing</b>	<b>Improvements</b>	
I-5	SR 54	Sea World Drive	8F	Access Improvements	\$170
I-5	I-805	SR 56	10F	14F	\$190
SR 56	I-5	I-15	4F	6F	\$40
SR 75/SR 282***	Glorietta Blvd.	Alameda Blvd.	6C	6C + 2TU	\$6
SR 76	Melrose Drive	Mission Road	2C	4C	\$100
SR 125**	Telegraph Cyn.	San Miguel Road	4T	6T	\$30
SR 125	San Miguel Rd.	SR 54	4F	6F	\$30
Regionally Significant Arterials and Local Freeway Access Interchanges					\$350
Subtotal					<b>\$916</b>
<b>Freeway Connectors</b>					
<b>Freeway</b>	<b>Intersecting Freeway</b>	<b>Movement</b>			
I-5	SR 56	West to North & South to East			\$140
I-5	SR 78	West to South & South to East			\$150
SR 94	SR 125	West to North & South to East			\$110
Subtotal					\$400
<b>Total</b>					<b>\$10,863</b>

KEY:

C = Conventional Highway Lanes

F = Freeway Lanes  
TU = Tunnel

T = Toll Road

MB = Movable Barrier

ML = Managed Lanes (HOV & Value Pricing)

HOV = High Occupancy Vehicle Lanes

ML(R) = Managed Lanes (Reversible)

\* funding from state/federal discretionary transportation funding sources

\*\* privately funded

\*\*\* funding from federal discretionary defense funding sources

Source: SANDAG, Final 2030 Regional Transportation Plan.

TABLE A.2—PHASED HIGHWAY PROJECTS – REVENUE CONSTRAINED PLAN <sup>1</sup>

YEAR BUILT BY	FREEWAY	FROM	TO	EXISTING	IMPROVEMENT	COST	( \$ MILLIONS) CUMULATIVE COST
2010	I-5/I-805	Port of Entry – Mexico	--	--	Inspection Facility	\$20	\$20
2010	I-5	I-805	SR 56	10F	14F	\$190	\$210
2010	I-15	SR 163	SR 56	8F + ML (R)	8F + 4ML/MB	\$200	\$410
2010	I-15	SR 56	Centre City Pkwy	8F	8F + 4ML/MB	\$340	\$750
2010	SR 56	Camino Ruiz	Carmel Country	--	4F	\$130	\$880
2010	SR 125	SR 905	San Miguel Road	--	4T	\$400	\$1,280
2010	SR 125	San Miguel Road	SR 54	--	4F	\$140	\$1,420
2010	SR 125	Jamacha Road	SR 94	--	6F	\$170	\$1,590
2010	SR 125	Navajo Road	Grossmont	--	6F	\$70	\$1,660
2010	SR 241	Orange County	I-5	--	4T	\$223	\$1,883
2010	SR 75/SR 282	Glorietta Blvd.	Alameda Blvd.	6C	6C+2TU (Preliminary Engineering Only)	\$6	\$1,889
2020	I-5	SR 54	Sea World Drive	8F	Access Improvements	\$170	\$2,059
2020	I-5/SR 56	West to North & South to East		--	Freeway Connectors	\$140	\$2,199
2020	I-15	Centre City Pkwy.	SR 78	8F	8F + 4ML	\$120	\$2,319
2020	SR 52	SR 125	SR 67	--	4F	\$290	\$2,609
2020	SR 905	I-805	Mexico	--	6F	\$290	\$2,899
2020	I-5	I-805	SR 56	14F	14F + 4ML	\$30	\$2,929
2020	I-5/I-805	North to North & South to South		--	HOV Connectors	\$180	\$3,109
2020	I-5	SR 56	Encinitas Blvd.	8F	8F + 4ML	\$400	\$3,509
2020	SR 54/SR 125	I-805	SR 94	6F/4F+2HOV	6F + 2HOV	\$90	\$3,599
2020	SR 56	I-5	I-15	4F	6F	\$40	\$3,639

Appendix A

YEAR BUILT BY	FREEWAY	FROM	TO	EXISTING	IMPROVEMENT	( \$ MILLIONS ) COST	CUMULATIVE COST
2020	SR 76	Melrose Drive	Mission Road	2C	4C	\$100	\$3,739
2020	SR 94/SR 125	West to North & South to East		--	Freeway Connectors	\$110	\$3,849
2020	SR 241	Orange County	I-5	4T	8T	\$184	\$4,033
2020	I-805	I-8	I-5	8F	8F + 4MIL	\$380	\$4,413
2030	I-5	Encinitas Blvd.	Vandegrift Blvd.	8F	8F + 4MIL	\$350	\$4,763
2030	I-5/SR 78	West to South & South to East		--	Freeway Connectors	\$150	\$4,913
2030	SR 11	SR 905	Mexico	--	4F	\$190	\$5,103
2030	I-15/SR 94	South to West & East to North		--	HOV Connectors	\$150	\$5,253
2030	I-15	SR 94	SR 163	6F/8F	8F + 2HOV	\$200	\$5,453
2030	SR 52	I-805	I-15	6F	6F + 2HOV	\$70	\$5,523
2030	SR 52	I-15	SR 125	4F	6F + 2MIL (R)	\$170	\$5,693
2030	SR 94	I-5	I-15	8F	8F + 2HOV	\$80	\$5,773
2030	SR 125	Telegraph Cyn.	San Miguel Road	4T	6T	\$30	\$5,803
2030	SR 125	San Miguel Road	SR 54	4F	6F	\$30	\$5,833
2030	I-805	SR 905	SR 54	8F	8F + 2HOV	\$150	\$5,983
2030	I-805	SR 54	I-8	8F	8F + 4MIL	\$450	\$6,433
2030	I-805	Mission Valley Viaduct		8F	8F + 4MIL	\$250	\$6,683

<sup>1</sup> These projects are included in the 2010, 2014, 2020, and 2030 analysis years for air quality assessment.

KEY:  
 C = Conventional Highway Lanes  
 F = Freeway Lanes  
 TU = Tunnel  
 T = Toll Road  
 MB = Movable Barrier  
 ML = Managed Lanes (HOV & Value Pricing)  
 HOV = High Occupancy Vehicle Lanes  
 ML(R) = Managed Lanes (Reversible)

Source: SANDAG, Final 2030 Regional Transportation Plan.

TABLE A.3—PHASED TRANSIT SERVICES – REVENUE CONSTRAINED PLAN <sup>1</sup>

YEAR <sup>1</sup>	ROUTE	DESCRIPTION	PEAK HEADWAY (MINUTES)	OFF-PEAK HEADWAY (MINUTES)
2010	611	El Cajon Boulevard to Centre City	10	-
2010	610	Escondido to Centre City via I-15/SR 94 (Limited Shoulder Lane)	10	-
2010	570	Mid-Coast to Balboa	15	30
2010	510	Extension of existing Blue Line trolley via Mission Valley East	7.5 (current)	15 (current)
2010	399	Increase in Oceanside to Escondido Rail - North County Fair extension (BRT)	30 (current rail) 15 (BRT)	30 (current rail) 30 (BRT)
2010	628	Centre City to Otay Mesa via SR 94/I-805 (Limited Shoulder Use)	10	-
2020	399	Increase in Oceanside to Escondido Rail - North County Fair (BRT)	15	30
2020	621	Centre City to Fashion Valley via Hillcrest/Genesee	10	10
2020	398	Increase in Coaster	20	120 (current)
2020	611	El Cajon Boulevard to Centre City	10	30
2020	570	Mid-Coast to UTC	15	30
2020	510	Increase in Existing Blue Line Trolley	7.5 (current)	7.5
2030	610	Escondido to SDIA via I-15/SR 94 (Limited Shoulder Lane)	10	30
2030	399	Increase in Oceanside to Escondido Rail - North County Fair (Rail)	15	30
2030	398	Increase in Coaster	20	60
2030	611	El Cajon Boulevard	10	10
2030	621	Centre City to Fashion Valley via Hillcrest/Genesee Avenue	10	10
2030	621	Centre City to UTC via Hillcrest/Genesee Avenue	10	30
2030	570	Mid-Coast to UTC	7.5	15
2030	628	Centre City to Otay Mesa via SR 94/I-805	10	10

<sup>1</sup> These projects are included in the 2010, 2020, and 2030 analysis years for air quality assessment.

Source: SANDAG, Final 2030 Regional Transportation Plan.



# Federal Register

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**Wednesday,  
January 5, 2005**

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**Part II**

**Environmental  
Protection Agency**

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**40 CFR Part 81**

**Air Quality Designations and  
Classifications for the Fine Particles  
(PM<sub>2.5</sub>) National Ambient Air Quality  
Standards; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 81**

[OAR–2003–0061; FRL–7856–1]

RIN–2060–AM04

**Air Quality Designations and Classifications for the Fine Particles (PM<sub>2.5</sub>) National Ambient Air Quality Standards****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** This rule sets forth the initial air quality designations and classifications for all areas in the United States, including Indian country, for the fine particles (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). The EPA is issuing this rule so that citizens will know whether the air quality where they live and work is healthful or unhealthful. Health studies have shown significant associations between exposure to PM<sub>2.5</sub> and premature death from heart or lung disease. Fine particles can also aggravate heart and lung diseases and have been linked to effects such as cardiovascular symptoms, cardiac arrhythmias, heart attacks, respiratory symptoms, asthma attacks, and bronchitis. These effects can result in increased hospital emissions, emergency room visits, absences from school or work, and restricted activity days.

Individuals that may be particularly sensitive to PM<sub>2.5</sub> exposure include people with heart or lung disease, older adults, and children. This rule establishes the boundaries for areas designated as nonattainment, unclassifiable, or attainment/unclassifiable. This rule does not establish or address State and Tribal obligations for planning and control requirements that apply to

nonattainment areas for the PM<sub>2.5</sub> standards. The EPA will publish a separate rule which will set forth the planning and control requirements that apply to nonattainment areas for the PM<sub>2.5</sub> standards.

**DATES:** The effective date of this rule is April 5, 2005.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID NO. OAR–2003–0061. All documents in the docket are listed in the EDOCKET index at <http://www.epa.gov/edocket>. Although listed in the index, some information is not publicly available *i.e.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in the EDOCKET or in hard copy at the Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m. Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Office of Air and Radiation Docket and Information Center is (202) 566–1742. In addition, we have placed a copy of the rule and a variety of materials regarding designations on EPA's designation Web site at: <http://www.epa.gov/oar/oaqps/particles/designations/index.htm> and on the Tribal Web site at: <http://www/epa.gov/air/tribal>.

**FOR FURTHER INFORMATION CONTACT:**

Designations: Mr. Rich Damberg, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C504–02, Research Triangle Park, NC 27711, phone number (919) 541–5592 or by e-mail at: [damberg.rich@epa.gov](mailto:damberg.rich@epa.gov).

Designations and Part 81 Code of Federal Regulations: Dr. Larry D. Wallace, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C504–02, Research Triangle Park, NC 27711, phone number (919) 541–0906 or by e-mail at: [wallace.larry@epa.gov](mailto:wallace.larry@epa.gov). Technical Issues Related to Designations: Mr. Thomas Rosendahl, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C504–02, Research Triangle Park, NC 27711, phone number (919) 541–5314 or by e-mail at: [rosendahl.tom@epa.gov](mailto:rosendahl.tom@epa.gov).

PM<sub>2.5</sub> Air Quality Data Issues: Mr. Mark Schmidt, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C304–01, Research Triangle Park, NC 27711, phone number (919) 541–5314 or by e-mail at: [schmidt.mark@epa.gov](mailto:schmidt.mark@epa.gov).

**Regional Office Contacts:**

Region I—Alison Simcox (617) 918–1684,  
Region II—Kenneth Fradkin (212) 637–3702,  
Region III—Denny Lohman (215) 814–2191,  
Region IV—Steve Scofield (404) 562–9034,  
Region V—John Summerhays (312) 886–6067,  
Region VI—Joe Kordzi (214) 665–7186,  
Region VII—Amy Algoe-Eakin (913) 551–7942,  
Region VIII—Libby Faulk (303) 312–6083,  
Region IX—Eleanor Kaplan (415) 744–1286,  
Region X—Keith Rose (206) 553–1949.

**SUPPLEMENTARY INFORMATION:** The public may inspect the rule and the technical support information at the following locations:

Regional offices	States
Dave Conroy, Acting Branch Chief, Air Programs Branch, EPA New England, 1 Congress Street, Suite 1100, Boston, MA 02114–2023, (617) 918–1661.	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.
Raymond Werner, Chief, Air Programs Branch, EPA Region II, 290 Broadway, 25th Floor, New York, NY 10007–1866, (212) 637–4249.	New Jersey, New York, Puerto Rico, and Virgin Islands.
Makeba Morris, Branch Chief, Air Quality Planning Branch, EPA Region III, 1650 Arch Street, Philadelphia, PA 19103–2187, (215) 814–2187.	Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.
Richard A. Schutt, Chief, Regulatory Development Section, EPA Region IV, Sam Nun Atlanta Federal Center, 61 Forsyth, Street, SW, 12th Floor, Atlanta, GA 30303, (404) 562–9033.	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.
Jay Bortzer, Chief, Air Programs Branch, EPA Region V, 77 West Jackson Street, Chicago, IL 60604, (312) 886–4447.	Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.
Donna Ascenzi, Acting Associate Director, Air Programs, EPA Region VI, 1445 Ross Avenue, Dallas, TX 75202, (214) 665–2725.	Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.
Joshua A. Tapp, Chief, Air Programs Branch, EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101–2907, (913) 551–7606.	Iowa, Kansas, Missouri, and Nebraska.

Regional offices	States
Richard R. Long, Director, Air and Radiation Program, EPA Region VIII, 999 18th, Suite 300, Denver, CO 80202, (303) 312-6005.	Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.
Steven Barhite, Air Planning Office, EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 972-3980.	Arizona, California, Guam, Hawaii, and Nevada.
Mahbubul Islam, Manager, State and Tribal Air Programs, EPA Region X, Office of Air, Waste, and Toxics, Mail Code OAAQ-107, 1200 Sixth Avenue, Seattle, WA 98101, (206) 553-6985.	Alaska, Idaho, Oregon, and Washington.

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## I. Preamble Glossary of Terms and Acronyms

The following are abbreviations of terms used in the preamble.

- CAA Clean Air Act  
 CFR Code of Federal Regulations  
 CMAQ Congestion Mitigation Air Quality  
 CMSA Consolidated Metropolitan Statistical Area  
 D.C. District of Columbia  
 EPA Environmental Protection Agency  
 FR Federal Register  
 MPO Metropolitan Planning Organizations

- MSA Metropolitan Statistical Area  
 NAAQS National Ambient Air Quality Standard  
 NO<sub>x</sub> Nitrogen Oxides  
 NOA Notice of Availability  
 NPR Notice of Proposed Rulemaking  
 NSR New Source Review  
 OMB Office of Management and Budget  
 RTC Response to Comment  
 SIP State Implementation Plan  
 TAR Tribal Authority Rule  
 TEA-21 Transportation Equity Act for the 21st Century  
 TPY Tons Per Year  
 TSD Technical Support Document  
 U.S. United States  
 VOC Volatile Organic Compounds

## II. What Is the Purpose of This Document?

The purpose of this document is to announce and promulgate designations and boundaries for areas of the country with respect to the PM<sub>2.5</sub> NAAQS in accordance with the requirements of the CAA. The list of areas in each State, the boundaries of each area, and the designation of each area, appear in the table at the end of this final rule. This rule was signed by the EPA Administrator, Mike Leavitt, on December 17, 2004. Several steps were taken to announce that this rule is available. We posted the notice on several EPA Web sites and provided a copy of the rule to States and Tribes.

## III. What Are Fine Particles?

Fine particles in the atmosphere are made up of a complex mixture of components. Common constituents include: sulfate (SO<sub>4</sub>); nitrate (NO<sub>3</sub>); ammonium (NH<sub>4</sub>); elemental carbon; a great variety of organic compounds; water; and inorganic material (including metals, dust, sea salt, and other trace elements), which often is categorized as "crustal" material. Airborne particles with a nominal aerodynamic diameter of 2.5 micrometers or less (a micrometer is one-millionth of a meter; 2.5 micrometers is less than about one-thirtieth the thickness of a human hair) are considered to be "fine particles," and are also known as PM<sub>2.5</sub>. "Primary" particles are emitted directly into the air as a solid or liquid particle

(e.g., elemental carbon and organic particles from diesel engines or burning activities). "Secondary" particles (e.g., sulfate and nitrate) form in the atmosphere as a result of various chemical transformations of gaseous precursors such as sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>).

## IV. What Are the Health Concerns Addressed by the PM<sub>2.5</sub> Standard?

Epidemiological studies have shown a significant association between elevated PM<sub>2.5</sub> levels and a number of serious health effects, including premature mortality, aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days), lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia. Individuals particularly sensitive to PM<sub>2.5</sub> exposure include older adults, people with heart and lung disease, and children.

More information on the health effects of PM<sub>2.5</sub> can be found at the following Web site: [http://www.epa.gov/ttn/naaqs/pm/pm25\\_index.html](http://www.epa.gov/ttn/naaqs/pm/pm25_index.html).

## V. What Is the Chronology of Events Leading Up to This Rule?

This section summarizes the relevant activities leading up to today's action, including promulgation of the PM<sub>2.5</sub> NAAQS and litigation challenging that standard. The CAA establishes a process for air quality management through the establishment and implementation of the NAAQS. After the promulgation of a new or revised NAAQS, EPA is required to designate areas, pursuant to section 107(d)(1) of the CAA, as attainment, nonattainment, or unclassifiable.

On July 18, 1997, EPA revised the NAAQS for particulate matter to add new standards for PM<sub>2.5</sub>, using PM<sub>2.5</sub> as the indicator for the pollutant. The EPA established health-based (primary) annual and 24-hour standards for PM<sub>2.5</sub> (62 FR 38652). The annual standard is a level of 15 micrograms per cubic meter, based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations. The

24-hour standard is a level 65 micrograms per cubic meter, based on a 3-year average of the 98th percentile of 24-hour concentrations. The EPA established the standards based on significant evidence and numerous health studies demonstrating that serious health effects are associated with exposures to particulate matter.

The PM<sub>2.5</sub> NAAQS were challenged by numerous litigants and in May 1999, the U.S. Court of Appeals for the D.C. Circuit issued a decision remanding, but not vacating, the standards. *American Trucking Assoc. v. EPA*, 175 F.3d 1027, 1047–48, *on rehearing* 195 F.3d 4 (D.C. Cir., 1999). The EPA sought review of two aspects of that decision in the U.S. Supreme Court. The Supreme Court upheld the PM<sub>2.5</sub> standards. *EPA v. American Trucking Assoc.*, 531 U.S. 457 (2001). In March 2002, the D.C. Circuit rejected all remaining challenges to the PM<sub>2.5</sub> standards, *American Trucking Assoc. v. EPA*, 283 F.3d 355 (D.C. Cir., 2002). Since final resolution of the litigation over the PM<sub>2.5</sub> NAAQS, EPA has been acting to implement the standards.

The process for designating areas following promulgation of a new or revised NAAQS is contained in section 107(d)(1) of the CAA. In June 1998, Congress adopted the Transportation Equity Act for the 21st Century (TEA–21). Section 6102(c)(1)(d) of TEA–21 amended section 107 of the CAA by extending the time period for EPA to initiate the designations process for the PM<sub>2.5</sub> NAAQS until 3 calendar years of air quality data, measured at Federal Reference Method monitors, were gathered. The EPA and State air quality agencies initiated the monitoring process for the PM<sub>2.5</sub> NAAQS in 1999, and deployed all air quality monitors by January 2001. The EPA is designating areas across the country for the PM<sub>2.5</sub> NAAQS based upon air quality monitoring data from these monitors for calendar years 2001–2003.

#### **VI. What Are the Clean Air Act (CAA) Requirements for Air Quality Designations and What Action has EPA Taken to Meet These Requirements?**

This section summarizes the provisions of section 107(d)(1) of the CAA which governs the process that States and EPA must follow in order to recommend and promulgate designations. Following the promulgation of a new or revised standard, each State Governor or Tribal leader has an opportunity to recommend air quality designations, including the appropriate boundaries for areas, to EPA. By no later than 120 days prior to promulgating designations,

EPA is required to notify States or Tribes of any intended modifications to their boundaries that EPA deems necessary. States and Tribes then have an opportunity to provide a demonstration as to why the proposed modification indicated by EPA is inappropriate. Whether or not a State or Tribe provides a recommendation, EPA must promulgate the designation that it deems appropriate.

In April 2003, EPA requested that States and Tribes submit their designation recommendations and supporting documentation to EPA by February 15, 2004. After receiving recommendations from the States and Tribes and carefully reviewing and evaluating each recommendation, EPA on June 28 and 29, 2004, provided a response to each State and Tribe indicating whether or not EPA intended to make modifications to the initial recommendations, and explaining EPA's reasons for making any such modifications. The EPA provided an opportunity for States and Tribes to respond to any proposed modifications to their initial boundary recommendations until September 1, 2004. In response to our June 28 and 29, 2004 letters, EPA received letters from many States and Tribes suggesting changes to EPA's modifications and providing additional information. The EPA evaluated each supplemental letter, and all of the timely technical support information provided, before arriving at the final designation decisions reflected in today's action. Some of the designations reflect our modifications to the State and Tribal recommendations. We have placed these State and Tribal letters, and our responses to the issues contained in them, in the EPA docket for this action.

Tribal designation activities are covered under the authority of section 301(d) of the CAA. This provision of the CAA authorizes EPA to treat eligible Indian Tribes in the same manner as States. Pursuant to section 301(d)(2), we promulgated regulations, known as the Tribal Authority Rule (TAR), on February 12, 1999. 63 FR 7254, codified at 40 CFR 49 (1999). This rule specifies those provisions of the CAA for which it is appropriate to treat Tribes as States. Under the TAR, Tribes may choose to develop and implement their own CAA programs, but are not required to do so. The TAR also establishes procedures and criteria by which Tribes may request from EPA a determination of eligibility for such treatment. The designations process contained in section 107(d) of the CAA is included among those provisions determined to be appropriate by EPA for treatment of

Tribes in the same manner as States. As authorized by the TAR, Tribes may request an opportunity to submit designation recommendations to us. In cases where Tribes do not make their own recommendations, EPA, in consultation with the Tribes, will promulgate the designation that EPA deems appropriate on their behalf. All Tribes were invited to submit recommendations concerning designations for PM<sub>2.5</sub>.

The EPA worked with the Tribes that requested an opportunity to submit designation recommendations. Eligible Tribes were provided an opportunity to submit their own recommendations and supporting documentation. The EPA reviewed the recommendations made by Tribes and, in consultation with the Tribes, made modifications as deemed necessary and appropriate. Under the TAR, Tribes generally are not subject to the same submission schedules imposed by the CAA on States.

#### **VII. What Guidance Did EPA Issue and How Did EPA Apply the Statutory Requirements and Applicable Guidance To Determine Boundaries for the PM<sub>2.5</sub> NAAQS?**

Section 107(d)(1)(A)(I) of the CAA defines a nonattainment area as an area that is violating an ambient standard or is contributing to air quality in a nearby area that is violating the standard. If an area meets either prong of this definition, then EPA is obligated to designate the area as nonattainment. Section 107(d)(1)(A)(iii) provides that any area which EPA cannot designate on the basis of available information as meeting or not meeting the standards should be designated unclassifiable.

In April 2003, EPA issued designation guidance concerning how to determine the boundaries for PM<sub>2.5</sub> nonattainment areas.<sup>1</sup> The guidance provided that EPA would use the 3 most recent calendar years of monitoring data for PM<sub>2.5</sub> to determine each county's designation. For today's PM<sub>2.5</sub> designations, we are basing our decision on air quality monitoring data from calendar years 2001–2003. When evaluating individual areas, we started with the premise that data recorded by a PM<sub>2.5</sub> monitor in most cases represents air quality throughout the area in which it is located. In addition, we considered the county boundary as the basic jurisdictional boundary for determining the extent of the area reflected by the PM<sub>2.5</sub> monitor. As a result, if a PM<sub>2.5</sub>

<sup>1</sup> See "Designations for the Fine Particle National Ambient Air Quality Standards." memorandum to Regional Administrators, Regions I–X, from Jeffrey R. Holmstead, Assistant Administrator, OAR, dated April 1, 2003.

monitor was violating the standard based on the 2001–2003 data, at a minimum we designated the entire county where that monitor is located as nonattainment. We made exceptions to this approach in a few very large western counties where a significant geographic feature such as a mountain range divided a county, resulting in different air quality in different parts of the county. In such cases, we considered designations of partial counties to be appropriate. After identifying the counties with violating monitors, we then proceeded to identify nearby counties that were potentially contributing to the violation(s) at the monitors.

In assessing whether nearby areas contributed to a violation, EPA started with the Consolidated Metropolitan Statistical Area (CMSA) and the Metropolitan Statistical Area (MSA) as the presumptive boundaries for PM<sub>2.5</sub> nonattainment areas. A metropolitan area, as defined by the Office of Management and Budget (OMB) in 1999, consisted of a single MSA in some cases, or a CMSA in other cases. These metropolitan areas provide boundaries for the geographic extent of urban areas. We suggested the use of metropolitan area boundaries as the presumptive boundaries for urban nonattainment areas for air quality purposes, based upon evidence that violations of the PM<sub>2.5</sub> air quality standards generally include a significant urban-scale contribution as well as a regional contribution. The actual size of each nonattainment area may be larger or smaller than the presumptive boundaries, depending upon the application of the nine factors contained in the April 2003 designations guidance for PM<sub>2.5</sub>.

In June 2003, OMB released a new list of metropolitan area descriptions. Because we had already issued the April 2003 designations guidance which recommended use of the 1999 OMB metropolitan definitions as a starting point, and because States and Tribes were already actively using this guidance in their planning efforts, we decided that it would be disruptive to recommend the use of the 2003 OMB definitions as the presumptive boundaries. Instead, we issued a second guidance memorandum in February 2004, which indicated that we would continue to consider the 1999 MSA boundaries as the presumptive boundaries, but that States should nevertheless take into consideration the 2003 OMB revised MSA boundaries. We particularly urged consideration of the 2003 MSA boundaries for those counties that OMB added to an existing

metropolitan area due to growth, or because of a high degree of social and economic integration with the primary urban area.<sup>2</sup>

The April 2003 guidance memorandum described nine factors that EPA would take into consideration in determining appropriate nonattainment area boundaries, whether larger or smaller than the presumptive boundaries: (1) Emissions and air quality in adjacent areas (including adjacent CMSAs and MSAs), (2) air quality in potentially included versus excluded areas, (3) population density and degree of urbanization including commercial development in included versus excluded areas, (4) traffic and commuting patterns, (5) expected growth (including extent, pattern and rate of growth), (6) meteorology (weather/transport patterns), (7) geography/topography (*e.g.*, mountain ranges or other air basin boundaries), (8) jurisdictional boundaries (*e.g.*, counties, air districts, Reservations, etc.), and (9) level of existing controls on emission sources.

In assessing emissions under the first factor, we developed a “weighted emissions score” that valued the effect of direct emissions of PM<sub>2.5</sub> and its precursors that contribute to “urban excess” PM<sub>2.5</sub> concentrations at monitor sites. The “urban excess” concentrations for each PM<sub>2.5</sub> component (direct or precursor emissions) are calculated from two PM<sub>2.5</sub> speciation monitors by subtracting the regional concentration from the urban concentration for each component. The methodology we used to calculate urban excess concentration and the weighted emission score is explained in more detail in the technical support document (TSD).

We used this metric to compare the relative emissions contribution of different counties in and around each metropolitan area. Using this approach, we were able to take into consideration, in a single metric, the county-level emissions of carbonaceous particles, inorganic particles, SO<sub>2</sub>, and NO<sub>x</sub> (all of which contribute to PM<sub>2.5</sub> formation) in the vicinity of each violating monitor. By comparing weighted emissions scores across counties in a metropolitan area, EPA was able to identify those counties having the highest estimated emissions contribution to the local nonattainment problem. In addition, by examining the data from the urban speciation monitors, we could draw

some conclusions concerning the likely sources of emissions contributing to the violation. Knowing the likely sources of the emissions, we could better evaluate which of the nearby counties had emissions likely to be contributing to the ambient concentrations at the violating monitor.

Evaluation of the weighted emissions score and speciation data was an important element in our nine factor analysis, and we believe that it provided a reasonable tool for evaluating the relative contribution of nearby areas to violations at a monitor, given the variety of precursors and sources that participate in the formation of PM<sub>2.5</sub>. Further discussion of the weighted emissions score, and area-specific explanations of its application, appear in the TSD.

In some cases, considering the factors and additional information provided by the State, we determined that only part of a nearby county (*e.g.*, the part of the county that contained the significant sources of contributing emissions) should be considered as contributing to the violation at the monitor, and therefore included only a portion of that adjacent county in the nonattainment area. In other cases, we determined that the emissions from an identifiable large power plant in a county were contributing to the violations in a nearby area. In these cases, we concluded that it was appropriate to designate only the portion of the county where the source is located, even if that portion is not contiguous with the remainder of the nonattainment area. We adopted this approach where we determined, following the nine factor analysis, that it would be inappropriate to include other portions of a county, merely because those portions lay between the large stationary source and the remainder of the designated nonattainment area. We selected the boundaries for these noncontiguous portions of nonattainment areas by relying on legally recognized governmental boundaries (*e.g.*, townships, tax districts, or census blocks) in which the source is located.

We believe that the individual facts and circumstances of each area must be considered in determining whether to include a county as contributing to a particular nonattainment problem. Thus, our guidance does not establish bright lines or cut-points for how a particular factor is applied. For example, the guidance does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county to be included in a nonattainment area as a contributing

<sup>2</sup> See “Additional Guidance on Defining Area Boundaries for PM-2.5 Designations,” memorandum to Air Division Directors, Regions I–X, from Lydia N. Wegman, Director, AQSSD, dated February 13, 2004.

county. We analyzed the information provided by each State or Tribe in its recommendation letter, subsequently submitted information, and any other pertinent information available to EPA, in order to determine whether a county should be designated nonattainment. We evaluated each State's or Tribe's designation recommendation in light of the nine factors, bringing to bear our best technical and policy judgement. If the result of the evaluation showed that a county, whether inside or outside of the CMSA or MSA contributes to the violation in a nearby area with a violating monitor, we designated the area as nonattainment.

In a small number of areas, EPA concluded that there was insufficient information to designate a given area as either nonattainment or attainment/unclassifiable. In these instances, we have designated the area as unclassifiable. In each instance, these areas had violating monitors for the years 2000–2002, but incomplete data or other data issues for the years 2001–2003. Further explanation of the unclassifiable designations may be found in the TSD for this action.

The EPA did not rely on planned or potential regional PM<sub>2.5</sub> reduction strategies in making decisions regarding nonattainment designations, even if those strategies predict that an area may attain the standard in the future. We recognize that some areas with a violating monitor may be projected to come into attainment in the future without additional local emission controls because of State and/or national programs that will reduce transported emissions. However, the CAA requires EPA to make nonattainment designations based on current data. While we cannot consider projected future attainment in determining current designations, we intend to expedite the redesignation of areas to attainment once they monitor clean air quality. We also intend to apply our policy which streamlines the planning process for nonattainment areas that are meeting the NAAQS but are not yet redesignated to attainment.<sup>3</sup>

Today's designation action is a final rule which establishes designations for all areas of the country for the PM<sub>2.5</sub> NAAQS. In this action, we have added regulatory text to provide for the amendment of 40 CFR part 81 to identify the designation of areas across the country for the PM<sub>2.5</sub> standard.

<sup>3</sup> See "Clean Data Policy for the Fine Particle National Ambient Air Quality Standards" memorandum to Air Division Directors, Regions I–X from Steve Page, Director, Office of Air Quality Planning and Standards, December 14, 2004.

#### VIII. Has EPA Used 2004 Air Quality Data?

The final PM<sub>2.5</sub> designations announced in today's action are based upon air quality data for calendar years 2001 through 2003. Over the course of the designations process, a number of States have provided comments to EPA suggesting that the agency should delay designations in order to permit consideration of additional air quality data from 2004 as a part of the designation decision. As discussed above, EPA must by law make the designations by December 31, 2004. This statutory deadline and the practical difficulties of obtaining complete,<sup>4</sup> quality assured, certified data for calendar year 2004 by December 31, 2004, have precluded EPA from using 2004 data for today's action. Under normal circumstances, we would not expect such data to be available for some time following the end of the calendar year, and under the applicable regulations States would not be required to have submitted such data until April 1, 2005, and would not be required to have certified such data until July 1, 2005. However, because we are promulgating the designations so near the end of calendar year 2004, and because complete, quality assured, certified 2004 data may become available for some areas quickly, we are interested in providing a process by which we could utilize 2004 data where possible in the designation process.

We have provided that the final PM<sub>2.5</sub> designations announced in today's action will be effective on the date 90 days following the date of publication. If any State submits complete, quality assured, certified 2004 data to EPA by February 22, 2005, that suggest that a change of designation status is appropriate for any area within that State, and we agree that a change of designation status is appropriate, then we will withdraw the designation announced in today's action for such area and issue another designation that reflects the inclusion of 2004 data. We emphasize that we will conduct this process only for those States that submit the necessary complete, quality assured, certified data by the deadline and in those instances where we can complete the analysis and effect the change of designation status before the original effective date established by today's final action.

<sup>4</sup> Fine particle monitoring data is to be determined as "complete" according to data handling regulations for the PM<sub>2.5</sub> standards in 40 CFR Part 50, Appendix N (62 FR 138, July 18, 1997).

If inclusion of 2004 data causes an area to change from nonattainment to attainment, EPA will change the designation if every county in the area is neither monitoring a violation of the standards nor contributing to a violation of the standards in another nearby area. If inclusion of 2004 data results in nonattainment in an area that was designated attainment, we will evaluate the reasons for the violation in the area and determine the appropriate course of action, which could include redesignation of the area to nonattainment. Also, EPA commits to evaluate 2004 data for unclassifiable areas when it receives complete, quality assured, certified data from the State, which is due no later than July 2005. At that time, EPA will determine whether a change of designation for an unclassifiable area is appropriate.

#### IX. How Do Designations Affect Indian Country?

All counties, partial counties or Air Quality Control Regions listed in the table at the end of this document are designated as indicated, and include Indian Country geographically located within such areas, except as otherwise indicated in the table.

As mentioned earlier in this document, EPA's guidance for determining nonattainment area boundaries presumes that the CMSA or MSA monitor forms the presumptive boundary of the nonattainment areas but that the size of the area can be larger or smaller depending on contribution to the violation from nearby areas and other air quality-related technical factors. In general, and consistent with relevant air quality information, EPA intends to include Indian country encompassed within the presumptive CMSA or MSA boundaries as within the boundaries of the area for designation purposes, in order to protect public health and welfare. The EPA anticipates that in most cases, relevant air quality information will indicate that areas of Indian country located within CMSAs or MSAs should have the same designation as the surrounding area. However, based on the nine factors outlined in our guidance, there may be instances where a different designation is appropriate.

A State recommendation for a designation of an area that surrounds Indian country does not indicate the designation for Indian country. However, the conditions that support a State's designation recommendation, such as air quality data at the location of the sources, may indicate the likelihood that similar conditions exists for the Indian country located in that

area. States generally have neither the responsibility nor the authority for planning and regulatory activities under the CAA in Indian country.

#### **X. Where Can I Find Information Forming the Basis for This Rule and Exchanges Between EPA, States, and Tribes Related to This Rule?**

Information providing the basis for today's action and related decisions are provided in the TSD. The TSD, applicable EPA guidance memoranda, copies of correspondence regarding this process between EPA and the States, Tribes, and other parties, and EPA's responses to comments, are available for review at the EPA Docket Center listed above in the addresses section of this document and on our designation Web site at <http://www.epa.gov/oar/oaqps/particles/designations/index.htm>. State specific information is available at the EPA Regional Offices.

#### **XI. Statutory and Executive Order Reviews**

Upon promulgation of a new or revised NAAQS, the CAA requires EPA to designate areas as attaining or not attaining the NAAQS. The CAA then specifies requirements for areas based on whether such areas are attaining or not attaining the NAAQS. In this final rule, EPA assigns designations to areas as required.

##### *A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is "significant" and, therefore, subject to OMB review and the requirements of the Executive Order. The order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is not a "significant regulatory action" because none of the

above factors apply. As such, this final rule was not formally submitted to OMB for review.

##### *B. Paperwork Reduction Act*

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* This rule responds to the requirement to promulgate air quality designations after promulgation of a NAAQS. This requirement is prescribed in the CAA section 107 of title 1. The present final rule does not establish any new information collection apart from that required by law. Burden means that total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in the CFR are listed in 40 CFR part 9.

##### *C. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedures Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For the purpose of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) A small business that is a small industry entity as defined in the United States Small Business Administration (SBA) size standards (*See* 13 CFR part 121); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3)

a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominated in its field.

The rule designating nonattainment areas for the PM<sub>2.5</sub> NAAQS is not subject to RFA because it was not subject to notice and comment rulemaking requirements. *See* CAA section 107(d)(2)(B).

After considering the economic impacts of today's final rule on small entities, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

##### *D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal Agencies to assess the effects of their regulatory actions on State, local and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandate" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small government on compliance with regulatory requirements.

Today's final action does not include a Federal mandate within the meaning of UMRA that may result in expenditures of \$100 million or more in any 1 year by either State, local, or

Tribal governments in the aggregate or to the private sector, and therefore, is not subject to the requirements of sections 202 and 205 of the UMRA. It does not create any additional requirements beyond those of the PM<sub>2.5</sub> NAAQS (62 FR 38652; July 18, 1997), therefore, no UMRA analysis is needed. This rule establishes the application of the PM<sub>2.5</sub> standard and the designation for each area of the country for the PM<sub>2.5</sub> NAAQS. The CAA requires States to develop plans, including control measures, based on their designations and classifications.

One mandate that may apply as a consequence of this action to all designated nonattainment areas is the requirement under CAA section 176(c) and associated regulations to demonstrate conformity of Federal actions to State Implementation Plans (SIPs). These rules apply to Federal agencies and Metropolitan Planning Organizations (MPOs) making conformity determinations. The EPA concludes that such conformity determinations will not cost \$100 million or more in the aggregate.

The EPA believes that any new controls imposed as a result of this action will not cost in the aggregate \$100 million or more annually. Thus, this Federal action will not impose mandates that will require expenditures of \$100 million or more in the aggregate in any 1 year.

Nonetheless, EPA carried out consultation with government entities affected by this rule, including States, Tribal governments, and local air pollution control agencies.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, or the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The CAA

establishes the scheme whereby States take the lead in developing plans to meet the NAAQS. This rule will not modify the relationship of the States and EPA for purposes of developing programs to implement the NAAQS. Thus, Executive Order 13132 does not apply to this rule.

#### *F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications." This final rule does not have "Tribal implications" as specified in Executive Order 13175. This rule concerns the designation and classification of areas as attainment and nonattainment for the PM<sub>2.5</sub> air quality standard. The CAA provides for States to develop plans to regulate emissions of air pollutants within their jurisdictions. The TAR provides Tribes the opportunity to develop and implement CAA programs such as programs to attain and maintain the PM<sub>2.5</sub> NAAQS, but it leaves to the discretion of the Tribe the decision of whether to develop these programs and which programs, or appropriate elements of a program, the Tribe will adopt.

This final rule does not have Tribal implications as defined by Executive Order 13175. It does not have a substantial direct effect on one or more Indian Tribes, since no Tribe has implemented a CAA program to attain the PM<sub>2.5</sub> NAAQS at this time. Furthermore, this rule does not affect the relationship or distribution of power and responsibilities between the Federal government and Indian Tribes. The CAA and the TAR establish the relationship of the Federal government and Tribes in developing plans to attain the NAAQS, and this rule does nothing to modify that relationship. Because this rule does not have Tribal implications, Executive Order 13175 does not apply.

Although Executive Order 13175 does not apply to this rule, EPA did outreach to Tribal leaders and environmental staff regarding the designations process. The EPA supports a national "Tribal Designations and Implementation Work Group" which provides an open forum for all Tribes to voice concerns to EPA about the designations and implementation process for the NAAQS, including the PM<sub>2.5</sub> NAAQS. These discussions informed EPA about key

Tribal concerns regarding designations as the rule was under development and gave Tribes the opportunity to express concerns about designations to EPA. Furthermore, EPA sent individualized letters to all federally recognized Tribes about EPA's intention to designate areas for the PM<sub>2.5</sub> standard and gave Tribal leaders the opportunity for consultation.

#### *G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks*

Executive Order 13045: "Protection of Children From Environmental Health and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health and safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the EPA.

The final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because EPA does not have reason to believe that the environmental health risks or safety risks addressed by this rule present a disproportionate risk or safety risk to children. Nonetheless, we have evaluated the environmental health or safety effects of the PM<sub>2.5</sub> NAAQS on children. The results of this risk assessment are contained in the NAAQS for PM<sub>2.5</sub>, Final Rule (July 18, 1997, 62 FR 38652).

#### *H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not subject to Executive Order 13211, "Actions That Significantly Affect Energy Supply, Distribution, or Use," (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

Information on the methodology and data regarding the assessment of potential energy impacts is found in Chapter 6 of U.S. EPA 2002, Cost, Emission Reduction, Energy, and the Implementation Framework for the PM<sub>2.5</sub> NAAQS, prepared by the Innovative Strategies and Economics Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC, April 24, 2003.

### I. National Technology Transfer Advancement Act (NTTAA)

Section 12(d) of the NTTAA of 1995, Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This action does not involve technical standards. Therefore, EPA did not consider the use of any VCS.

### J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective April 5, 2005.

### K. Judicial Review

Section 307 (b) (1) of the CAA indicates which Federal Courts of Appeal have venue for petitions of review of final actions by EPA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit (i) when the agency action consists of "nationally applicable regulations promulgated, or final actions taken, by the Administrator," or (ii) when such action is locally or regionally applicable, if "such action is based on a determination of nationwide scope or

effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

This rule designating areas for the PM<sub>2.5</sub> NAAQS is "nationally applicable" within the meaning of section 307(b)(1). This rule establishes designations for all areas of the United States for the PM<sub>2.5</sub> NAAQS. At the core of this rulemaking is EPA's interpretation of the definition of nonattainment under section 107(d)(1) of the CAA. In determining which areas should be designated nonattainment (or conversely, should be designated attainment/unclassifiable), EPA used a set of nine technical factors that it applied consistently across the United States.

For the same reasons, the Administrator also is determining that the final designations are of nationwide scope and effect for the purposes of section 307(b)(1). This is particularly appropriate because in the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that an action is of "nationwide scope or effect" would be appropriate for any action that has "scope or effect beyond a single judicial circuit." H.R. Rep. No. 95-294 at 323, 324, *reprinted* in 1977 U.S.C.C.A.N. 1402-03. Here, the scope and effect of this rulemaking extends to numerous judicial circuits since the designations apply to all areas of the country. In these circumstances, section 307(b)(1) and its legislative history calls for the Administrator to find the rule to be of "nationwide scope or effect" and for venue to be in the D.C. Circuit.

Thus, any petitions for review of final designations must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the **Federal Register**.

### List of Subjects in 40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: December 17, 2004.

**Michael O. Leavitt**,  
EPA Administrator.

■ For the reasons set forth in the preamble, 40 CFR Part 81, Subpart C is amended as follows:

## PART 81—DESIGNATIONS OF AREAS FOR AIR QUALITY PLANNING PURPOSES

■ 1. The authority citation for part 81 continues to read as follows:

*Authority:* 42 U.S.C. 7401, *et seq.*

### Subpart C—Section 107 Attainment Status Designations

■ 2. Section 81.300 is amended by revising paragraph (a) to read as follows:

#### § 81.300 Scope.

(a) Attainment status designations as approved or designated by the Environmental Protection Agency (EPA) pursuant to section 107 of the CAA are listed in this subpart. Area designations are subject to revision whenever sufficient data becomes available to warrant a redesignation. Both the State and EPA can initiate changes to these designations, but any State redesignation must be submitted to EPA for concurrence. The EPA has replaced the national ambient air quality standards for particulate matter measured as total suspended particulate with standards measured as particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM-10). Accordingly, area designations for PM-10 are included in the lists in subpart C of this part. However, the TSP area designations will also remain in effect until the Administrator determines that the designations are no longer necessary for implementing the maximum allowable increases in concentrations of particulate matter pursuant to section 163(b) of the CAA, as explained in paragraph (b) of this section. The EPA has also added national ambient air quality standards for fine particulate matter measured as particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM<sub>2.5</sub>). Accordingly, area designations for PM<sub>2.5</sub> are included in the lists in subpart C of this part.

\* \* \* \* \*

■ 2a. In § 81.301, the table entitled "Alabama—PM<sub>2.5</sub>" is added to the end of the section to read as follows:

#### § 81.301 Alabama.

\* \* \* \* \*

CALIFORNIA.—PM2.5—Continued

Designated area	Designation <sup>a</sup>	
	Date <sup>1</sup>	Type
That portion of Los Angeles County which lies south and west of a line described as follows: Beginning at the Los Angeles-San Bernardino County boundary and running west along the Township line common to Township 3 North and Township 2 North, San Bernardino Base and Meridian; then north along the range line common to Range 8 West and Range 9 West; then west along the Township line common to Township 4 North and Township 3 North; then north along the range line common to Range 12 West and Range 13 West to the southeast corner of Section 12, Township 5 North and Range 13 West; then west along the south boundaries of Sections 12, 11, 10, 9, 8, and 7, Township 5 North and Range 13 West to the boundary of the Angeles National Forest which is collinear with the range line common to Range 13 West and Range 14 West; then north and west along the Angeles National Forest boundary to the point of intersection with the Township line common to Township 7 North and Township 6 North (point is at the northwest corner of Section 4 in Township 6 North and Range 14 West); then west along the Township line common to Township 7 North and Township 6 North; then north along the range line common to Range 15 West and Range 16 West to the southeast corner of Section 13, Township 7 North and Range 16 West; then along the south boundaries of Sections 13, 14, 15, 16, 17, and 18, Township 7 North and Range 16 West; then north along the range line common to Range 16 West and Range 17 West to the north boundary of the Angeles National Forest (collinear with the Township line common to Township 8 North and Township 7 North); then west and north along the Angeles National Forest boundary to the point of intersection with the south boundary of the Rancho La Liebre Land Grant; then west and north along this land grant boundary to the Los Angeles-Kern County boundary.		
Orange County .....	.....	Nonattainment.
Riverside County (part) .....	.....	Nonattainment.
That portion of Riverside County which lies to the west of a line described as follows: Beginning at the Riverside-San Diego County boundary and running north along the range line common to Range 4 East and Range 3 East, San Bernardino Base and Meridian; then east along the Township line common to Township 8 South and Township 7 South; then north along the range line common to Range 5 East and Range 4 East; then west along the Township line common to Township 6 South and Township 7 South to the southwest corner of Section 34, Township 6 South, Range 4 East; then north along the west boundaries of Sections 34, 27, 22, 15, 10, and 3, Township 6 South, Range 4 East; then west along the Township line common to Township 5 South and Township 6 South; then north along the range line common to Range 4 East and Range 3 East; then west along the south boundaries of Sections 13, 14, 15, 16, 17, and 18, Township 5 South, Range 3 East; then north along the range line common to Range 2 East and Range 3 East; to the Riverside-San Bernardino County line.		
San Bernardino County (part) .....	.....	Nonattainment.
That portion of San Bernardino County which lies south and west of a line described as follows: Beginning at the San Bernardino-Riverside County boundary and running north along the range line common to Range 3 East and Range 2 East, San Bernardino Base and Meridian; then west along the Township line common to Township 3 North and Township 2 North to the San Bernardino-Los Angeles County boundary.		
San Diego, CA:		
San Diego County (part) .....	.....	Nonattainment.
That portion of San Diego County that excludes the areas listed below: La Posta Areas #1 and #2, Cuyapaipa Area, Manzanita Area, Campo Areas #1 and #2 <sup>b</sup> .		
San Joaquin Valley, CA:		
Fresno County .....	.....	Nonattainment.
Kern County (part) .....	.....	Nonattainment.
That portion of Kern County which lies west and north of a line described as follows: Beginning at the Kern-Los Angeles County boundary and running north and east along the northwest boundary of the Rancho La Libre Land Grant to the point of intersection with the range line common to R. 16 W. and R. 17 W., San Bernardino Base and Meridian; north along the range line to the point of intersection with the Rancho El Tejon Land Grant boundary; then southeast, northeast, and northwest along the boundary of the Rancho El Tejon Land Grant to the northwest corner of S. 3, T. 11 N., R. 17 W.; then west 1.2 miles; then north to the Rancho El Tejon Land Grant boundary; then northwest along the Rancho El Tejon line to the southeast corner of S. 34, T. 32 S., R. 30 E., Mount Diablo Base and Meridian; then north to the northwest corner of S. 35, T. 31 S., R. 30 E.; then northeast along the boundary of the Rancho El Tejon Land Grant to the southwest corner of S. 18, T. 31 S., R. 31 E.; then east to the southeast corner of S. 13, T. 31 S., R. 31 E.; then north along the range line common to R. 31 E. and R. 32 E., Mount Diablo Base and Meridian, to the northwest corner of S. 6, T. 29 S., R. 32 E.; then east to the southwest corner of S. 31, T. 28 S., R. 32 E.; then north along the range line common to R. 31 E. and R. 32 E. to the northwest corner of S. 6, T. 28 S., R. 32 E., then west to the southeast corner of S. 36, T. 27 S., R. 31 E., then north along the range line common to R. 31 E. and R. 32 E. to the Kern-Tulare County boundary.		
Kings County .....	.....	Nonattainment.

