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## **I. INTRODUCTION**

Ten areas of California qualify for redesignation to attainment for the National Ambient Air Quality Standard (NAAQS) for carbon monoxide (CO) (eight-hour average). To streamline the process, the Air Resources Board (ARB) has prepared a Redesignation Request, Attainment Demonstration, and Maintenance Plan that covers all ten areas. Also included are the related emission inventories for 1990 and 1993.

ARB previously submitted 1990 and 1993 winter season CO emission inventories for these areas as required by the federal Clean Air Act (CAA) section 187(a)(5). Although these emission inventory submittals constitute revisions to the State Implementation Plan (SIP), public meetings were deferred in accordance with the U.S. Environmental Protection Agency (U.S. EPA) policy to allow inventories to be considered along with attainment or maintenance plans.

## **II. BACKGROUND**

### **A. AREAS PROPOSED FOR REDESIGNATION**

The ten areas proposed for redesignation (see Figure 1) were affirmed as nonattainment for CO in the November 6, 1991, Federal Register (Vol. 56, No. 215, pp. 56723-56725). ARB's emission control programs, including strict motor vehicle emission standards and the clean fuels program, have reduced CO emissions dramatically. The decrease in emissions has improved CO air quality enough for the areas listed below to make them eligible for redesignation to attainment for the national CO standard:

Bakersfield Metropolitan Area	Chico Urbanized Area
Fresno Urbanized Area	Lake Tahoe No. Shore Area <sup>1</sup>
Lake Tahoe So. Shore Area <sup>2</sup>	Modesto Urbanized Area
Sacramento Area <sup>3</sup>	San Diego Area <sup>4</sup>
San Francisco-Oakland-San Jose Area <sup>5</sup>	Stockton Urbanized Area

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<sup>1</sup> Placer County part of Lake Tahoe Air Basin

<sup>2</sup> El Dorado County part of Lake Tahoe Air Basin.

<sup>3</sup> Urbanized parts of Sacramento, Placer, and Yolo Counties.

<sup>4</sup> Western part of County only.

<sup>5</sup> Urbanized parts of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

# MAP OF CALIFORNIA

Eight of the areas were classified as moderate nonattainment, while two areas were not classified. Moderate areas are those with an eight-hour average CO design value between 9.1 and 16.4 parts per million (ppm) or less. (The design value is the highest of the second high eight-hour concentrations observed at any site in the area and is the value on which the determination of attainment or nonattainment is based.) An “unclassified” nonattainment area is one with data showing no violations but, because it had been designated as nonattainment prior to the 1990 CAA Amendments, was continued as nonattainment by operation of law until redesignation requirements are completed.

## **B. NATIONAL AMBIENT AIR QUALITY STANDARDS FOR CARBON MONOXIDE**

The current national ambient air quality standards for CO are 9 ppm, eight-hour average, and 35 ppm, one-hour average. Areas subject to this redesignation request are designated nonattainment only for the eight-hour CO standard. (No areas in California violate the one-hour average.)

U.S. EPA requires an area to have two consecutive calendar years of complete, quality-assured monitoring data with no violations before it can be redesignated attainment for the CO standard. The attainment demonstration must be based on representative air monitoring data collected with approved measuring instruments and procedures and with adequate quality assurance and quality control. ARB and air district monitoring equipment and procedures meet all such U.S. EPA criteria.

No monitor in an area requested for redesignation can have more than one eight-hour average concentration exceeding 9 ppm during either of the two most recent calendar years. The rounding convention in the NAAQS specifies that values less than 9.45 ppm do not exceed the standard, whereas concentrations of 9.45 ppm or greater do.

## **C. CLEAN AIR ACT CONDITIONS FOR REDESIGNATION**

Section 107(d)(3)(E) of the CAA lists the following five conditions that must be met before the U.S. EPA Administrator can redesignate an area from nonattainment to attainment:

1. The area has attained the NAAQS;
2. The area has a U.S. EPA fully-approved SIP;
3. The area's improved air quality is due to permanent and enforceable emission reductions resulting from the implementation of the applicable implementation plan;

4. The area has a Maintenance Plan that meets the requirements of CAA section 175A; and
5. The area has met all the requirements in section 110 and part D of the CAA, and other applicable sections.

### **III. DOCUMENTATION OF COMPLIANCE WITH REDESIGNATION REQUIREMENTS**

#### **A. ATTAINMENT DEMONSTRATION**

The CAA requires moderate and unclassified CO nonattainment areas to attain the standard by December 31, 1995. This section provides the attainment demonstrations for the ten redesignation areas, including a description of the monitoring network and air quality data confirming attainment.

##### **1. Carbon Monoxide Monitoring Network**

The State and Local Air Monitoring Stations (SLAMS) together with the National Air Monitoring Stations (NAMS) form the network of monitoring stations that provide the data used to demonstrate attainment. This network is reviewed annually by the ARB and the U.S. EPA as part of the development of the State and Local Air Monitoring Network Plan, as required by Title 40, Code of Federal Regulations (CFR), Part 58.

Attachment 1 lists all the monitoring stations from which data were obtained and reviewed for confirming attainment in the redesignation areas. It also lists, for each monitoring station, the urban area code, U.S. EPA's database site identification code, station location, beginning and ending date of operation, organization code, and monitoring code.

##### **2. Data**

All CO data reviewed to confirm attainment were retrieved from the Aerometric Information Retrieval System (AIRS) maintained by U.S. EPA. These data were reviewed for completeness, especially for the winter months of November, December, and January, during which concentrations are highest.

The data used to confirm attainment are the CO eight-hour design values. The design value is the highest of the second high eight-hour concentrations observed at any site in the area. Table 1 lists the design value for each nonattainment area.

**TABLE 1**

**CARBON MONOXIDE DESIGN VALUES IN ATTAINMENT YEARS**

<b>NONATTAINMENT AREA</b>	<b>ATTAINMENT PERIOD<sup>1</sup></b>	<b>DESIGN VALUE (ppm)</b>
Bakersfield	1992-1994 <sup>2</sup>	6.1
Chico	1993-1995 <sup>3</sup>	5.4
Fresno	1993-1995 <sup>4</sup>	9.1
Lake Tahoe North Shore	1993-1994	3.8
Lake Tahoe South Shore	1993-1994	7.4
Modesto	1993-1994	6.6
Sacramento Area	1993-1994	9.0
San Diego	1993-1994	7.0
San Francisco-Oakland-San Jose	1993-1994	7.2
Stockton	1993-1994	7.5

<sup>1</sup> Except as otherwise noted, data are from calendar years 1993 and 1994.

<sup>2</sup> Bakersfield: The sites used for the attainment demonstration were closed during the third quarter of 1994. Therefore, the eight-hour design value was based on CO data from November 1992 through February 1993 and November 1993 through February 1994.

<sup>3</sup> Chico: The 1993-1994 period is missing two of the eight months that have potential for high CO values; therefore, the eight-hour design value was based on CO data from November 1993 through February 1994 and November 1994 through February 1995.

<sup>4</sup> Fresno: The site triggering the nonattainment designation, Fresno-Olive, was closed during 1990. Data supporting the attainment demonstration are from Fresno-Fisher, a site determined to be equivalent. CO data from the Fresno-Fisher site are for November 1993 through January of 1994 and December 1994 through February 1995.

Air quality data show that the ten areas no longer violate the national eight-hour CO standard. Table 2 presents the design value trends for the four most recent CO seasons for which there are complete data. A review of the data also shows a general decline in CO design values since 1990.

**TABLE 2**  
**TRENDS IN CARBON MONOXIDE DESIGN VALUES**  
**(ppm)**

NONATTAINMENT AREA	1990-1991	1991-1992	1992-1993	1993-1994
Bakersfield	8.4	7.8	5.5	6.1
Chico	9.1	9.1	5.9	5.4
Fresno	9.0	9.0	6.9	9.1
Lake Tahoe North Shore	--	--	--	3.8
Lake Tahoe South Shore	10.1	9.0	9.0	7.4
Modesto	10.5	9.4	6.6	6.6
Sacramento Area	12.6	10.9	9.0	9.0
San Diego	8.1	7.6	7.0	7.0
San Francisco-Oakland-San Jose	10.5	10.3	7.0	7.2
Stockton	10.9	10.9	6.6	7.5

**B. FULLY-APPROVED STATE IMPLEMENTATION PLAN AND OTHER REQUIREMENTS FOR MODERATE NONATTAINMENT AREAS**

As set forth in the CAA, the following applicable requirements for redesignation are found in sections 110, 111, part D, and 211(m)(1) :

- Comprehensive, accurate, and current emission inventory
- Periodic emission inventory
- Wintertime oxygenated gasoline
- Vehicle Inspection and Maintenance (I/M)
- Forecast of vehicle miles traveled (VMT), including annual updates
- Contingency measures for VMT exceedances
- Attainment demonstration
- New Source Review (NSR) SIP submittals

California has met these requirements. Before each nonattainment area can be redesignated to attainment, U.S. EPA must approve the individual required elements for each area. ARB is requesting that U.S. EPA approve each of the elements either prior to, or concurrent with, action on the Request for Redesignation. Once U.S. EPA approves each of these items, the condition that the areas have a fully-approved SIP will be met.



The following is an itemized list of these requirements and ARB's actions:

**SIP Requirement:** Submit a statewide 1990 CO emissions inventory by November 15, 1992, and periodic revisions every three years thereafter until attainment.

**ARB Action:** Submitted the 1990 CO inventory on November 13, 1992. The first periodic revision was submitted on September 29, 1995.

**SIP Requirement:** Submit a SIP revision requiring wintertime oxygenated gasoline for nonattainment areas with a design value of 9.5 ppm or greater.

**ARB Action:** SIP revision and separate waiver request submitted October 30, 1992. Wintertime sale of oxygenated fuel began that year and will continue through early 1996, at which time the requirement will be incorporated into the California Cleaner-Burning Gasoline program, which was approved as a SIP revision on August 21, 1995 (60 FR 43379).

**SIP Requirement:** Submit a Basic or Enhanced Motor Vehicle Inspection and Maintenance program.

**ARB Action:** Submitted a SIP revision June 30, 1995, for both Basic and Enhanced I/M programs. Because the majority of areas are also classified as serious or above for ozone nonattainment, Enhanced I/M is required in most of the CO areas being requested for redesignation (Chico and the Placer County portion of the Sacramento Valley Air Basin are excluded). I/M is not required in the Lake Tahoe Air Basin since it did not have an existing I/M program prior to enactment of the 1990 CAA Amendments (section 187(a)(4)).

**SIP Requirement:** For moderate nonattainment areas with a design value greater than 12.7 ppm at the time of classification, submit a VMT forecast and annual updates, a contingency plan for VMT exceedances, and an attainment demonstration. This applies only to Fresno.

**ARB Action:** These requirements were satisfied by the submittal of the Fresno "Federal 1992 Air Quality Attainment Plan for CO" on December 28, 1992. This report satisfies the additional requirement for the annual VMT update due September 30, 1995, for Fresno.

**SIP Requirement:** Submit part D New Source Review (NSR) permit requirements.

**ARB Action:** All CO nonattainment areas meet NSR requirements. Submittal dates of rules as SIP revisions are shown in Table 3.

Although districts amended existing NSR rules in response to the 1990 Clean Air Act, the provisions in state law for new source review programs -- Best Available Control Technology and offset thresholds -- are more stringent than federal requirements. Since U.S. EPA has not yet approved any of the submitted rules, they were not part of the SIP prior to redesignation. For SIP purposes, our inventory projections for the affected areas, treat NSR programs as emissions neutral -- we do not assume any net emission reductions from these rules.

In fact, the Maintenance Plan provides a growth allowance for stationary and area sources, while emissions from mobile sources continue to decline from attainment levels. The stationary source growth rate, between 1993 and 2010, ranges from four percent for North Tahoe up to 40 percent for Sacramento, with an average of about 25 percent. Since mobile sources dominate the CO inventory, this stationary growth will be more than offset by reductions from adopted state mobile source measures. Even in the area with the highest projected stationary growth, total emissions are expected to decline 38 percent from attainment levels by 2010.

**TABLE 3**

**NSR SIP SUBMITTALS TO U.S. EPA**

<b>Area</b>	<b>Submittal Date</b>
Bakersfield (Kern Co.)	11-13-92
Chico (Butte Co.)	5-13-93
Fresno Co.	11-13-92
Lake Tahoe (El Dorado Co.)	5-24-94
Modesto (Stanislaus Co.)	11-13-92
Placer Co. (SVAB & LTAB)	1-24-95
Sacramento Co.	11-13-92
San Diego Co.	7-13-94
San Francisco Bay Area	11-13-92
Stockton (San Joaquin Co.)	11-13-92
Yolo Co.	3-29-94

**C. PERMANENT AND ENFORCEABLE EMISSION REDUCTIONS**

Improvements in air quality must be shown not to have occurred as a result of temporary economic conditions or favorable meteorology. One approach to assessing whether economic conditions contributed to improved air quality is to review the VMT trends for each CO nonattainment area. Motor vehicle usage has been observed in the past to decrease with poor economic conditions. Because motor vehicles are the primary source of CO, any significant change in VMT should be reflected as changes in CO emissions. Table 4 shows VMT increased, on average, 14 percent for the areas during the period in which CO air quality was improving. The trends support a finding that CO emission reductions did not occur as a result of decreased VMT associated with an economic downturn.

**TABLE 4**  
**VEHICLE MILES TRAVELED<sup>1</sup>**  
**(thousands)**

<b>AREA</b>	<b>1990</b>	<b>1993</b>	<b>1995</b>
Bakersfield Metropolitan Area (Kern Co.)	12606	13728	15196
Chico Urbanized Area (Butte Co.)	3988	4196	4394
Fresno Urbanized Area (Fresno Co.)	15150	16744	17897
Lake Tahoe No. Shore (Placer Co.)	383	434	451
Lake Tahoe So. Shore (El Dorado Co.)	811	897	923
Modesto Urbanized Area (Stanislaus Co.)	8478	9465	10121
<b>Sacramento Area</b>			
Placer Co. (Sacramento Valley)	5700	6302	7040
Sacramento Co.	22202	24811	26550
Yolo Co.	3598	3990	4252
San Diego Area (San Diego Co.) <sup>2</sup>	61990	63272	64121
<b>San Francisco-Oakland-San Jose Area</b>			
Alameda Co.	25345	26601	27857
Contra Costa Co.	15883	17146	17989
Marin Co.	5201	5332	5420
Napa Co.	1791	1965	2080
San Francisco Co.	8347	8670	8886
San Mateo Co.	12980	13483	13819
Santa Clara Co.	28023	29229	30036
Solano Co.	5880	6337	6643
Sonoma Co.	4909	5265	5504
Stockton Urbanized Area (San Joaquin Co.)	11508	13084	14139

<sup>1</sup> ARB motor vehicle activity data (BURDEN7F); 1/19/94 run date.

<sup>2</sup> VMT estimates for San Diego based on data supplied by SANDAG in August 1994.

The improved air quality also must not have occurred solely because of favorable meteorology. Stable weather conditions characterized by cold temperatures, very low inversion layers, and very light to no winds contribute to higher CO levels. In contrast, unstable weather conditions characterized by medium to strong, gusty winds provide good mixing and dispersion which contribute to lower CO levels. An indicator that can be used to estimate unstable weather conditions during a season is the number of days with measurable precipitation ( $\geq 0.01$ ""). Therefore, one method for assessing favorable meteorology is to compare the historical average number of days with measurable precipitation in a CO season (November through February) with the number of days during the attainment period.

Table 5 displays data comparing the historical (1961-1995) average number of days with measurable precipitation in a CO season with the number of days in the two CO seasons on which the attainment demonstration is based.

**TABLE 5**

**MEASURABLE PRECIPITATION ( $\geq 0.01$ " ) DURING CO SEASON<sup>1</sup>**

Station	35-Yr Average	1992-1993	1993-1994
	Number of	Number of	Number of
Bakersfield	22	30	20
Chico <sup>2</sup>	38	46	34
Fresno	27	32	20
Lake Tahoe <sup>3</sup>	--	46	32
Modesto <sup>4</sup>	31	45	29
Sacramento	35	47	32
San Francisco	37	46	32
San Diego	23	38	23
Stockton	30	40	28

<sup>1</sup> Precipitation data were obtained from the National Oceanic and Atmospheric Administration

<sup>2</sup> Chico precipitation data for 1961 through 1990 based on data gathered at Redding; Chico precipitation data were used for 1991-1995.

<sup>3</sup> Historical precipitation data for Lake Tahoe were not available.

<sup>4</sup> Modesto precipitation data for 1961 through 1990 based on data gathered at Stockton; Modesto precipitation data were used for 1991-1995.

As shown in Table 5, the 1992-1993 CO season had more days of measurable precipitation than the 35-year average, while the 1993-1994 CO season had, except for San Diego, fewer days of precipitation than the historical average for all the sites. Although it appears that CO concentrations during the 1992-1993 season may have been influenced by favorable meteorology, the decline in CO design values continued during the 1993-1994 CO season, despite less favorable meteorology. The data support a finding that favorable meteorology did not account solely for the lower CO levels during the attainment period.

We believe that the reduction in CO levels is a direct result of the emission reductions resulting from the implementation of a number of ARB mobile source and clean fuel regulations, as well as stationary source regulations implemented by local districts.

Table 6 lists the regulations implemented by the ARB since 1992 that provide significant CO emission reduction benefits. ARB's motor vehicle and fuels programs reduced CO emissions from on-road mobile sources by 27 percent between 1990 and 1994 in spite of an increase in statewide daily VMT of 9 percent during that period.

**TABLE 6**

**RECENT ARB MEASURES CONTRIBUTING TO ATTAINMENT OF THE CARBON MONOXIDE STANDARD**

Initial Date of Implementation	Regulation
1992	Phase I Gasoline
1992	Wintertime Oxygenated Gasoline
1993	Exhaust Emission Standards and Test Procedures
1993	Clean Diesel Fuel Regulation
1994	Low-emission Vehicles and Clean Fuels

**D. MAINTENANCE PLAN**

A maintenance plan for "low" moderate areas with design values originally between 9.1 and 12.7 ppm must contain the first three elements listed below. "High" moderate areas (original design value greater than 12.7 ppm) must include all four elements listed below in its maintenance plan.

1. A demonstration that the national standard will be maintained for at least ten years after redesignation;
2. A contingency provision to correct for any violations of the standard that might occur after the area is redesignated to attainment;
3. Provisions for continued air monitoring to verify the attainment status of the redesignated area; and
4. A demonstration based on a microscale model to show that the proposed reductions in emissions will be enough to maintain the standard.

## 1. Maintenance Demonstration

Maintenance of the standard can be shown by comparing the emissions inventory for the period during which an area attained the standard to emission inventory projections for at least ten years beyond the date of approval by the U.S. EPA (see Table 7). The emissions inventory comparison, which includes the years 1990, 1993, 1995, 2000, 2005, and 2010, shows emissions will continue to decline for all redesignation areas.

**TABLE 7**  
**CARBON MONOXIDE WINTER SEASONAL EMISSION INVENTORY TRENDS <sup>1</sup>**  
**(TONS PER DAY)**

<b>CO NONATTAINMENT AREA</b>	<b>1990</b>	<b>1993</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
Bakersfield <sup>2</sup>	423	356	348	329	304	286
Chico	229	189	183	167	155	153
Fresno	511	436	414	362	328	321
Lake Tahoe North Shore	32	28	26	22	19	18
Lake Tahoe South Shore	100	89	86	76	66	64
Modesto	311	282	270	239	216	212
Sacramento Area <sup>3</sup>	1214	1026	971	822	690	635
San Diego	1927	1492	1345	1062	904	832
San Francisco-Oakland-San Jose <sup>4</sup>	3731	3019	2786	2268	1896	1716
Stockton	463	400	380	334	297	285

<sup>1</sup> ARB 1993 base year emission inventory (10/3/95 run date--based on EMFAC7F). Except where noted, emissions data reflect county totals.

<sup>2</sup> Reflects corrected Kern County emission inventory (1/29/96 run date).

<sup>3</sup> Combined emission inventory for Sacramento, Placer, and Yolo Counties.

<sup>4</sup> Emission inventory for San Francisco Bay Area Air Basin.

## 2. Contingency Measures

Maintenance plans for attainment areas must include contingency provisions, or extra measures beyond those needed for attainment, to offset any unexpected increase in emissions and ensure that the standard is maintained. Typically, contingency measures are held in reserve and implemented only if an area violates the standard in the future. However, California's on-going motor vehicle program creates a unique situation and allows ARB to offer, as contingency, several regulations that will be implemented, regardless of monitored CO levels. Table 8 shows adopted ARB measures with multi-pollutant benefits which will "come on line" from 1996 through 2003. These measures will generate new reductions in CO emissions, above and beyond those needed for attainment. These measures provide sufficient reductions in future years to guarantee an ample margin of safety to ensure maintenance of the standard and to provide adequate additional reductions to cover the contingency requirements.

**TABLE 8**

### **CONTINGENCY MEASURES**

<b>Implementation Date(s)</b>	<b>Regulation</b>
1996	Improved Basic Inspection and Maintenance Program (Bay Area, Chico, North and South Shore Lake)
1996	Enhanced Inspection and Maintenance Program (Bakersfield, Fresno, Modesto, Sacramento Area <sup>2</sup> ,
1996	On-Board Diagnostics II (Statewide)
1996	California Cleaner-Burning Gasoline (Statewide)
1997	Off-Highway Recreational Vehicles (Statewide)
1999	Lawn and Garden Equipment - Tier II (Statewide)
1996, 1997, 1998, 1999, 2000, 2001,	Low-Emission Vehicles and Clean Fuels - Post 1995 Standards (Statewide)

<sup>1</sup> Program applies to change of ownership only.

<sup>2</sup> Pilot program implemented in 1995.



U.S. EPA policy guidance states that, at a minimum, the contingency measures must include a requirement that the State will implement all measures contained in the nonattainment CO SIP prior to redesignation (*General Preamble for the Implementation of Title I*, 57 FR 13498 and Calcagni memo, "Procedures for Processing Requests to Redesignate Areas to Attainment," September 4, 1992). California commits to meeting this requirement. The ARB has previously submitted the above regulations (or waiver requests as appropriate) to support the 1994 California SIP for Ozone.

### **3. Continued Air Monitoring and Verification of Continued Attainment**

Continued attainment must be verified from ambient air quality data collected in the redesignation areas. ARB will continue to comply with the monitoring criteria set forth in 40 CFR 58, "Ambient Air Quality Surveillance." In addition, ARB will annually review data from the two most recent, consecutive years in order to verify continued attainment of the national carbon monoxide standard.

### **4. Additional Requirements for High Moderate Areas (Original Design Value Greater than 12.7 ppm)**

U.S. EPA policy calls for high moderate areas to base their maintenance demonstration on the same type of model as was used for the attainment demonstration. The model must show that proposed reductions in emissions will be enough to maintain the standard. The only area that falls into this category is the Fresno Urbanized Area. Fresno's earlier attainment demonstration was based on a directly proportional rollback analysis which assumes a direct correlation between emissions and ambient CO levels.

The model must be based on data collected from the area's microscale or "hot spot" site where CO levels are highest. The current "hot spot" or microscale monitoring site in Fresno, on which the design value is based, is located at the intersection of Fisher and Olive Streets which began operating in November 1994. This site replaced the historic Fresno-Olive site on which the nonattainment designation was based. The Fisher site is located approximately 600 feet east of First Street and 125 feet south of Olive Street, very close to the historic Fresno-Olive site. Traffic counts from the First and Olive Streets intersection over the past several years verify that the monitor is located near one of the top ten most frequently traveled intersections in the Fresno Urbanized Area. This area of Fresno is primarily residential and is not impacted by stationary sources of carbon monoxide.

Table 9 includes rollback analyses, similar to the one used in Fresno's attainment demonstration, which demonstrate that Fresno will be able to maintain the CO standard through 2010. The rollback analyses provide linear projections of the design values based on the winter seasonal emission inventory for all sources and on the motor vehicle portion of the inventory. Both sets of estimated design values show that the Fresno area will be able to maintain the CO standard with a considerable margin of safety, despite the projected increase in VMT. The emission inventory incorporates the benefits associated with the ARB regulations which were implemented prior to 1996 (Table 6), and also includes the ARB-adopted regulations (Table 8) that will "come on line" in 1996 and beyond.

**TABLE 9**  
**ROLLBACK ANALYSIS FOR THE FRESNO URBANIZED AREA**  
**(Winter Seasonal Emission Inventory)**

<b>Fresno Urbanized Area</b>	<b>1993</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
All Sources of CO in the Emission Inventory (EI)	436 (tpd)	414	362	328	321
Projected Design Value (DV) $\left( \frac{1993EI}{1993DV} \propto \frac{2010EI}{2010DV} \right)$	9.1 <sup>1</sup> (ppm)	8.6	7.6	6.8	6.7
On-Road Motor Vehicle Portion of the CO Emission Inventory <sup>2</sup>	296 (tpd)	272	211	164	146
Projected Design Value (DV) $\left( \frac{1993EI}{1993DV} \propto \frac{2010EI}{2010DV} \right)$	9.1 (ppm)	8.4	6.5	5.0	4.5
Vehicle Miles Traveled <sup>3</sup> (in thousands)	16744	17897	21262	24538	27814

<sup>1</sup> 1993-1994 Design Value

<sup>2</sup> ARB Motor Vehicle Emission Inventory (MVEI7F); 1993 base year.

<sup>3</sup> ARB motor vehicle activity data (BURDEN7F); run date 1/19/94.

#### IV. TRANSPORTATION CONFORMITY REQUIREMENTS

CAA section 176(c) requires federally-supported transportation activities to be consistent with the SIP. This requirement is referred to as conformity. Transportation plans, programs, and projects must not cause or worsen violations of federal air quality standards, or impede attainment or maintenance of those standards. Moreover, transportation agencies must show that emissions from proposed regional transportation systems will not exceed the emissions attributed to on-road mobile sources in submitted implementation plans.

Metropolitan Planning Organizations and the U.S. Department of Transportation demonstrate that proposed transportation plans and programs are consistent with the SIP by showing that emissions associated with these plans and programs do not exceed applicable carrying capacities or "emission budgets."

The CO emission budgets shown in Table 10 are derived from the on-road motor vehicle emission inventory for CO in the attainment year for each county. These budgets become effective upon approval of this Maintenance Plan by U.S. EPA.

**TABLE 10**

#### **ON-ROAD CARBON MONOXIDE EMISSION BUDGETS**

<b>CO NONATTAINMENT AREA</b>	<b>EMISSIONS BUDGET <sup>1</sup></b>
Bakersfield (Kern Co.) <sup>2</sup>	223
Chico (Butte Co.)	100
Fresno (Fresno Co.)	296
Lake Tahoe North Shore	21
Lake Tahoe South Shore	63
Modesto (Stanislaus Co.)	177
Sacramento Urbanized Area <sup>3</sup>	780
San Diego (San Diego Co.)	1195
San Francisco Bay Area <sup>4</sup>	2193
Stockton (San Joaquin Co.)	261

<sup>1</sup> Emission budgets represent ARB's seasonal on-road motor vehicle emission inventory, MVEI7F; 1993 base year.

<sup>2</sup> Reflects corrected Kern County emission inventory (1/29/96 run date).

<sup>3</sup> Combined budgets for Placer (Sacramento Valley Air Basin portion), Sacramento, and Yolo Counties.

<sup>4</sup> Combined budgets for all nine counties in the San Francisco Bay Area Air Basin.

**ATTACHMENT 1**

**CARBON MONOXIDE  
AIR MONITORING NETWORK**

**ATTACHMENT 2**

**CARBON MONOXIDE WINTER SEASONAL  
EMISSION INVENTORY (1990-2010)**