



PUBLIC MEETING AGENDA

January 22 - 23, 2004
9:00 a.m.

04-1-1 Public Meeting to
Consider the State of the
State Air Quality Update

04-1-2 Public Meeting to
Consider a Health Update

04-1-3 Public Meeting to
Consider Research
Proposals

04-1-4 Public Hearing to
Consider Amendments to
Motor Vehicle Service
Information Regulations
Adopted in 2001

04-1-5 Public Hearing to
Consider 2003 State Area
Designations and
Designation Criteria Changes

Includes
Acrobat™
Reader™

PC and Mac
Compatible



ELECTRONIC BOARD BOOK

PUBLIC MEETING AGENDA

LOCATION:

California Environmental Protection Agency
Air Resources Board
Central Valley Auditorium, Second Floor
1001 I Street
Sacramento, CA 95814

This facility is accessible by public transit. For transit information, call: (916) 321-BUSS, website www.sacrt.com (This facility is accessible to persons with disabilities.)

January 22-23, 2004
9:00 a.m./8:30 a.m.

04-1-1 **Public Meeting to Consider the State of the State Air Quality Update** 

Staff will review the progress made in improving ozone and particulate matter air quality in California and the remaining challenges.

04-1-2 **Public Meeting to Consider a Health Update** 

Staff will provide information from recent research that has identified Particulate Matter from Asia as a major component of "background" PM in California.

04-1-3 **Public Meeting to Consider Research Proposals**

1. "Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort," State of California, Department of Health Services, \$188,536, Proposal No. 2546-233.
2. "Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health," University of California, Irvine, \$175,000, Proposal No. 2545-233.
3. "Survey of Ventilation Practices and Housing Characteristics in New California Homes," University of California, Berkeley, Survey Research Center, \$445,864, Proposal No. 2547-233.
4. "Hourly, In-Situ Quantification of Organic Aerosol Marker Compounds," University of California, Berkeley, \$269,330, Proposal No. 2544-233.

04-1-4 **Public Hearing to Consider Amendments to Motor Vehicle Service Information Regulations Adopted in 2001**

Staff will present an update to the Board on Implementation of the regulation, and will propose amendments to extend applicability of the regulation to heavy-duty vehicles.

CONTACT CLERK OF THE BOARD, 1001 I Street, 23rd Floor, Sacramento, CA 95814

(916) 322-5594

FAX: (916) 322-3928

ARB Homepage: www.arb.ca.gov

To submit written comments on an agenda item in advance of the meeting.

To request special accommodations for those persons with disabilities (at least 7 days prior to the meeting date please).

For persons with a hearing or speech impairment, please use our telephone device for the deaf

TDD: (916) 324-9531 or (800) 700-8326.

SMOKING IS NOT PERMITTED AT MEETINGS OF THE CALIFORNIA AIR RESOURCES BOARD

04-1-5 Public Hearing to Consider 2003 State Area Designations and Designation Criteria Changes

Staff will propose several changes to the existing area designations for the State standards, first-time designations for the new State PM 2.5 standard and several minor changes to the designation criteria.

POSTPONED

Public Hearing to Consider Adoption of Idling Emission Reduction Requirements for 2007 and Subsequent Model Heavy-Duty Diesel Vehicles has been postponed until further notice.

OPEN SESSION TO PROVIDE AN OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE BOARD ON SUBJECT MATTERS WITHIN THE JURISDICTION OF THE BOARD

Although no formal Board action may be taken, the Board is allowing an opportunity to interested members of the public to address the Board on items of interest that are within the Board's jurisdiction, but that do not specifically appear on the agenda. Each person will be allowed a maximum of five minutes to ensure that everyone has a chance to speak.

THOSE ITEMS ABOVE WHICH ARE NOT COMPLETED ON JANUARY 22 WILL BE HEARD BEGINNING AT 8:30 A.M. ON JANUARY 23.

THE AGENDA ITEMS LISTED ABOVE MAY BE CONSIDERED IN A DIFFERENT ORDER AT THE BOARD MEETING.

California Environmental Protection Agency



PUBLIC MEETING AGENDA

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Air Resources Board
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January 22-23, 2004

9:00 a.m./8:30 a.m.

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04-1-4 Public Hearing to Consider Amendments to Motor Vehicle Service Information Regulations Adopted in 2001	27-80
04-1-5 Public Hearing to Consider 2003 State Area Designations and Designation Criteria Changes	81-253

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State of California
AIR RESOURCES BOARD

Research Resolutions

Research Division

January 22, 2004

INTRODUCTION

Contained herein for Board review are four resolutions and accompanying summaries from the Extramural Research Program recommended to the Board by the Research Screening Committee.

Item 1 is a research proposal, Resolution 04-1, from the State of California, Department of Health Services, entitled, "Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort." The principal investigator will be Michael Lipsett, M.D.

Item 2 is a research proposal, Resolution 04-2, from the University of California, Irvine, entitled, "Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health." The principal investigator will be Ralph Delfino, M.D., Ph.D.

Item 3 is a research proposal, Resolution 04-3, from the University of California, Berkeley, entitled, "Survey of Ventilation Practices and Housing Characteristics in New California Homes." The principal investigator will be Dr. Thomas Piazza.

Item 4 is a research proposal, Resolution 04-4, from the University of California, Berkeley, entitled, "Hourly, In-Situ Quantification of Organic Aerosol Marker Compounds." The principal investigator will be Professor Allen Goldstein.

PROPOSED**State of California
AIR RESOURCES BOARD**

Resolution 04-1

January 22, 2004

Agenda Item No.: 04-1-3

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2546-233, entitled "Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort," has been submitted by the Department of Health Services.

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

Proposal Number 2546-233 entitled "Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort," submitted by the Department of Health Services, for a total amount not to exceed \$189,992.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

Proposal Number 2546-233 entitled "Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort," submitted by the Department of Health Services, for a total amount not to exceed \$189,992.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the research effort proposed herein, and as described in Attachment A, in an amount not to exceed \$189,992.

ATTACHMENT A

“Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort”

Background

The relationship between short-term (i.e., 24 hour) exposure to ambient air pollution and exacerbation of pre-existing cardiopulmonary illness and mortality in susceptible individuals has been well established. However, little is known about the health effects of long-term exposure of ambient air pollution, particularly on the development of cardiac or respiratory diseases and mortality; and the roles of specific sources, especially traffic-associated emissions, with respect to the pathogenesis of chronic illness. This study makes use of an existing dataset, the California Teachers' cohort, established by the Northern California Cancer Center and the California Department of Health Services, which includes 133,479 current and former female public school teachers and administrators recruited in 1995. The information gathered from this cohort will allow the investigators to study whether long-term exposure to PM (PM10 and PM2.5) air pollution or to any of several gaseous pollutants is associated with cardiovascular and cardiopulmonary disease incidence or mortality.

Objective

The overall objective of this study is to understand the role of air pollution, including particulate and gaseous pollutants, in the development of cardiovascular and cardiopulmonary disease and mortality from cardiovascular and cardiopulmonary disease. Specifically, the investigators propose three main objectives:

- 1) To examine whether long-term exposure to PM air pollution or to any of several gaseous pollutants is associated with cardiovascular, cardiopulmonary, and total mortality.
- 2) To examine whether long-term exposure to PM (principally PM10 and PM2.5) or to any of several gaseous pollutants is associated with the incidence of myocardial infarction or stroke.
- 3) To examine whether exposure to traffic emissions, measured by residential proximity to busy roads, is specifically related to cardiovascular disease incidence and/or mortality.

Methods

The investigator will calculate monthly averages of the ambient pollutants and determine the long-term exposure from the closest monitor to the teachers residence. In addition, the investigators propose to use three data sources to generate three separate traffic measures as surrogates of exposure. These include a) vehicle density (which provides an estimate of potential exposure to evaporative and cold-start emissions because it is a measure of where vehicles are parked at night), b) road density (which is a measure of miles of road per square mile of land area around each study participant's address), and c) traffic density (which is a count of number of vehicles traveling on a particular road over a 24-hour period).

Analyses of data will be done using the Cox Proportional Hazards model which will allow the investigators to assess risk of each outcome associated with pollutants of interests after adjusting for a variety of individual-level risk factors.

Expected Results

The results would be the first to examine impacts of long-term traffic exposures on incidence and mortality from cardiovascular disease in the U.S., and would also be the first large cohort anywhere to examine the relationship of long-term air pollution exposure on the incidence of new cases of cardiovascular diseases. This study has the potential to gather more exposure information than the well-known American Cancer Society and the Six-Cities studies and will provide new insight into the potential role of air pollution on the incidence of and mortality from cardiovascular and cardiopulmonary disease.

Significance to the Board

There are very few studies that have looked at long-term exposure of ambient air pollution, and how it may be linked to cardiac and respiratory disease is an issue of enormous public health and regulatory significance. These results would be important in the next reviews of the ambient standards for PM10, PM2.5, and gaseous pollutants in California.

Contractor:

The Department of Health Services

Contract Period:

24 months

Principal Investigator (PI):

Michael Lipsett, M.D.

Contract Amount:

\$189,992

Cofunding:

No co-funding, but the principal investigator and other DHS personnel are donating their time to this project.

Basis for Indirect Cost Rate:

The indirect cost rate is a negotiated rate with the Department of Health Services of zero percent. The rate of 19.6% for the subcontractor Impact Assessment, Inc. is relatively low for a private corporation and is a federally approved rate.

Past Experience with this Principal Investigator:

Michael Lipsett, M.D., is Chief of the Exposure Assessment Section, Environmental Health Investigations Branch, California Department of Health Services, Oakland, California. In addition, his experience in air pollution and epidemiology has been

evaluation the California Ambient Air Quality Standards for particulate matter. He is an accomplished investigator who has published over 35 studies that are related to ambient air, indoor air pollution, and health effects.

Prior Research Division Funding to DHS:

Year	2002	2001	2000
Funding	\$0	\$0	\$0

BUDGET SUMMARY

Department of Health Services

"Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort"

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$	0
2.	Subcontractors	\$	189,992 ¹
3.	Equipment	\$	0
4.	Travel and Subsistence	\$	0
5.	Electronic Data Processing	\$	0
6.	Reproduction/Publication	\$	0
7.	Mail and Phone	\$	0
8.	Supplies	\$	0
9.	Analyses	\$	0
10.	Miscellaneous	\$	<u>0</u>

Total Direct Costs \$ 189,992

INDIRECT COSTS

1.	Overhead	\$	0
2.	General and Administrative Expenses	\$	0
3.	Other Indirect Costs	\$	0
4.	Fee or Profit	\$	<u>0</u>

Total Indirect Costs \$ 0

TOTAL PROJECT COSTS

\$189,992

¹ Subcontractors:

Impact Assessment, Inc. for a total cost of \$189,992.

Attachment 1

SUBCONTRACTORS' BUDGET SUMMARY

Subcontractor: Impact Assessment, Inc.

Description of subcontractor's responsibility: IAI will provide the services of specialized research staff and maintain responsibility for all aspects of contract management including financial management, monitoring and reporting, personnel administration, secondary subcontract and consultant purchasing as well as lease agreement.

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$	122,645
2.	Subcontractors	\$	10,000 ¹
3.	Equipment	\$	0
4.	Travel and Subsistence	\$	2,028
5.	Electronic Data Processing	\$	3,000
6.	Reproduction/Publication	\$	3,876
7.	Mail and Phone	\$	1,338
8.	Supplies	\$	0
9.	Analyses	\$	0
10.	Miscellaneous	\$	<u>16,461²</u>

Total Direct Costs \$159,348

INDIRECT COSTS

1.	Overhead	\$	0
2.	General and Administrative Expenses	\$	0
3.	Other Indirect Costs	\$	30,644 ³
4.	Fee or Profit	\$	<u>0</u>

Total Indirect Costs \$30,644

TOTAL PROJECT COSTS

\$189,992

¹A subcontract with Dr. Richard Burnett, PhD for \$10,000 will be used to provide expertise on the statistical analyses, particularly on spatial autocorrelation.

² Facilities Rent \$10,829
 General Expenses 4,476
 Consolidated Data Center 1,156
\$16,461

³Other costs that are normally considered indirect have been placed under Miscellaneous. Staff believe that those costs combined with these indirect costs still render a reasonable indirect cost rate.

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 04-2

January 22, 2004

Agenda Item No.: 04-1-3

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2545-233, entitled "Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health," has been submitted by the University of California, Irvine;

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

Proposal Number 2545-233, entitled "Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health," submitted by the University of California, Irvine, for a total amount not to exceed \$175,000.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

Proposal Number 2545-233, entitled "Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health," submitted by the University of California, Irvine, for a total amount not to exceed \$175,000.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the research effort proposed herein, and as described in Attachment A, in an amount not to exceed \$175,000.

ATTACHMENT A

“Determination of Reactive Oxygen Species Activity in PM and Enhanced Exposure Assessment for the NIH, NIEHS Study Entitled: Ultrafine Particulate Matter and Cardiorespiratory Health”

Background

The National Institute of Environmental Health Sciences (NIEHS) is funding a major health study that includes collection of health outcome data from elderly people who reside at sheltered living facilities in southern California. The study, as approved by NIEHS, will use data from existing routine air monitoring stations, personal and indoor monitoring, as well as ultrafine PM counts and activity records as exposure predictors. Participants will be followed in 4 communities each studied during periods of both high and low photochemical activity. A total of 72 subjects will be followed in small groups during repeated 5-day periods of study. Each subject will wear monitors to record heart electrical activity and blood pressure, and will carry electronic diaries to record locations and activities. The investigators crafted their proposal to maximize the study sample size and to assure that critical effects measures were made while not exceeding NIEHS funding caps.

Methods

The current proposal would provide funds and monitoring resources to expand the nature of air pollution data available for the NIEHS-supported health study, as well as to add collection and evaluation of the chemical and biological characteristics of PM samples. A mobile monitoring trailer would be assembled and instrumented by ARB. It would report ultrafine particle counts, NO_x, CO, Ozone, SO₂, as well as continuous PM mass (PM₁₀ and PM_{2.5}), carbon, nitrate, and sulfate. Indoor air monitoring efforts would also be enhanced by the operation of gaseous and carbon monitors. Mechanistic studies related to reactive oxygen species (ROS) are included. The ROS assays may reflect cellular level toxicity of particles that may explain how PM can harm people. The investigators will perform analyses of four quinone compounds that have previously been shown to play a role in redox reactions.

Objective

The overarching objective of the parent NIEHS funded study is to determine the nature of particulate-phase air pollution impacts on various parameters related to the health status of people who have existing cardiorespiratory disease. The specific objectives of this proposal are:

- To augment, extend, and improve existing air pollution monitoring activities. This will provide improved data for exposure assessments for particulate and gaseous air pollutants of health concern. The requested \$175,000 will be applied to fund efforts within this objective; and
- To evaluate the nature of particulate matter interactions with specific markers of possible chemical and biochemical activities that may be especially harmful. These markers are known as reactive oxygen species (ROS).

Expected Results

The results of this study are expected to define how common air pollutants, especially particle phase pollutants are related to observed health impacts in people who may be at special risk because of existing cardiovascular disease. The results of joint ARB/ South Coast Air Quality Monitoring District funded extensions of this work will enhance the likelihood of finding pollutant associations and will expand investigations to possibly explain the biological mechanisms by which effects may occur.

Significance to the Board

This study would address important questions of which chemical or size fractions of PM are most harmful, and what biological mechanisms underlie harmful effects. The funds requested would be heavily leveraged against a federally sponsored project. The findings of this study would have direct application to our Vulnerable Populations Research Program, to evaluations of air quality standards for PM, and increase our level of understanding regarding important air pollution exposures experienced by the elderly, a group of special concern for adverse impacts from ambient PM. The nature of the overall study, with the proposed additional monitoring, may provide findings regarding the short-term health consequences of PM exposure.

Contractor:

University of California, Irvine

Contract Period:

36 Months

Principal Investigator (PI):

Ralph Delfino, MD, Ph.D.

Contract Amount:

\$175,000 (cost sharing is anticipated between ARB and the South Coast Air Quality Management District to find full amount).

Cofunding:

This project is heavily cofunded. The base project is funded by the National Institute of Environmental Health Sciences at an amount of \$3.3 million. The current proposal requests approximately \$175,000. At this time, we plan to work with the South Coast Air Quality Management District to provide the required total funding and monitoring resources.

Basis for Indirect Cost Rate:

Indirect cost from the University of California, both for the prime contractor (UC Irvine) and a subcontractor (UC Los Angeles) are calculated at a rate of 10 percent while that for the subcontractor the University of Southern California are calculated at a rate of 30% (down from typical rates of over 55%).

Past Experience with this Principal Investigator:

The investigator has a well-earned reputation at the national level for innovative field epidemiological studies. He recently successfully completed a study funded by the ARB and the South Coast Air Quality Management District that evaluated the nature of childhood asthma and community exposures to toxic and criteria air pollutants.

Prior Research Division Funding to UCI:

Year	2002	2001	2000
Funding	\$140,590	\$34,800	\$200,000

BUDGET SUMMARY

University of California, Irvine

**“Determination of Reactive Oxygen Species Activity in PM and Enhanced
Exposure Assessment For the NIH, NIEHS Study Entitled: Ultrafine Particulate
Matter and Cardiorespiratory Health”**

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$ 91,707
2.	Subcontractors	\$ 0
3.	Equipment	\$ 71,200 ¹
4.	Travel and Subsistence	\$ 0
5.	Electronic Data Processing	\$ 0
6.	Reproduction/Publication	\$ 0
7.	Mail and Phone	\$ 0
8.	Supplies	\$ 2,657
9.	Analyses	\$ 0
10.	Miscellaneous	<u>\$ 0</u>
	Total Direct Costs	<u>\$ 165,564</u>

INDIRECT COSTS

1.	Overhead	\$ 9,436
2.	General and Administrative Expenses	\$ 0
3.	Other Indirect Costs	\$ 0
4.	Fee or Profit	<u>\$ 0</u>
	Total Indirect Costs	<u>\$ 9,436</u>

TOTAL PROJECT COSTS **\$ 175,000**

¹ Equipment- 2 continuous EC-OC analyzers (including shipping and training).

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 04-3

January 22, 2004

Agenda Item No.: 04-1-3

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2547-233 entitled "Survey of Ventilation Practices and Housing Characteristics in New California Homes," has been submitted by the University of California, Berkeley;

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

Proposal Number 2547-233 entitled "Survey of Ventilation Practices and Housing Characteristics in New California Homes," submitted by the University of California, Berkeley, for a total amount not to exceed \$445,864.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

Proposal Number 2547-233 entitled "Survey of Ventilation Practices and Housing Characteristics in New California Homes," submitted by the University of California, Berkeley, for a total amount not to exceed \$445,864.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the research effort proposed herein, and as described in Attachment A, in an amount not to exceed \$445,864.

ATTACHMENT A

“Survey of Ventilation Practices and Housing Characteristics in New California Homes”

Background

The California Energy Commission (Commission) sets energy efficiency standards for new California homes that reduce building air leakage in order to conserve energy. These standards assume that acceptable indoor air quality is maintained by certain levels of air exchange between indoor and outdoor air due to occupant window-opening habits and other activities. Concerns have been raised that occupants do not use windows, doors, exhaust fans, and other mechanical ventilation devices sufficiently to remove formaldehyde and other indoor contaminants, such as emissions from heating and cooking. To determine whether revisions are needed in the next update of the state building energy standards to address these concerns, the Commission needs information on ventilation practices in new California homes. In addition, ARB needs information about materials and activities that emit formaldehyde and other Toxic Air Contaminants in new homes. This information is needed to assess Californians' exposures to toxic air contaminants as required by Health and Safety Code Section 39660.5, and to help design a field study of indoor air quality in new homes.

There is no information currently available on ventilation practices in new California homes and the reasons for these practices. In addition, there is little information available regarding the mix of building materials, appliances, and other potential pollutant sources currently used in constructing new California homes. The Commission is funding this study, and will fund a follow-on field study of indoor air quality and ventilation in new homes.

Objectives

The goals of this study are to obtain information needed to guide the development of future building standards that protect indoor air quality in California homes, and to obtain information useful for updating and improving exposure and risk assessments for indoor and outdoor air pollutants in California. The objectives of this study are to:

- 1) Determine the extent to which occupants use windows, doors, and mechanical ventilation devices in new single-family homes in California.
- 2) Determine the occupants' perceptions of and satisfaction with indoor air quality in their homes.
- 3) Determine the relationships among ventilation practices, indoor air quality indicators, house characteristics, and household factors.
- 4) Identify barriers to occupant use of natural and mechanical ventilation to achieve adequate air exchange in their homes.

Methods

Investigators will conduct a mail survey of about 1,000 owner-occupants of new California homes in three different climate zones over at least two seasons. The investigators will first develop and pre-test a questionnaire on building characteristics

and appliances, ventilation practices, occupant satisfaction with indoor air quality and environmental conditions, indoor pollutant sources, occupant activities, occupant health status, and household socioeconomic factors. The questionnaire will then be mailed to a random selection of owner-residents of new homes. A sub-group of homes with "whole-house" mechanical ventilation systems that are designed to increase outdoor air exchange rates will also be targeted. The investigators will conduct basic statistical analyses of the survey responses, and analyze the relationships among ventilation practices, perceptions and indicators of indoor air quality, house characteristics, and household socioeconomic factors.

Expected Results

The study will produce high-quality, representative data on factors that determine ventilation sufficiency and indoor air quality in new homes, and the relationships among those factors. The study will also provide information needed for designing and conducting a companion field study, as well as potential participants for the field study.

Significance to the Board

This proposed study would be the first major study of ventilation practices and other factors affecting indoor air quality in new California homes. The results would help ARB to identify the types and use of pollutant sources in new homes, such as new carpets, paint, cabinetry, and heating and cooking appliances. ARB would use the study results to: 1) assess Californians' exposures to toxic air contaminants and guide possible future regulations; 2) obtain a sample and refine the study design for a field study of indoor air quality in new homes, and 3) develop recommendations to the public for achieving good indoor air quality in their homes. In addition, ARB and the Commission will use the results to determine the need for changes to the Commission's building design and construction standards for ventilation of new homes in order to provide acceptable indoor air quality.

Contractor:

University of California, Berkeley

Contract Period:

24 months

Principal Investigator (PI):

Dr. Thomas Piazza

Contract Amount:

\$445,864

Cofunding:

The California Energy Commission is providing contract funding from the Public Interest Energy Research program, through an interagency agreement with ARB.

Basis for Indirect Cost Rate:

The State and UC System have agreed to a ten percent indirect cost rate.

Past Experience with this Principal Investigator:

The Survey Research Center successfully completed two landmark surveys of human activity patterns that were conducted for ARB in the late 1980's. The Principal Investigator was a key member of the research teams for those studies and performed well.

Prior Research Division Funding to UCB:

Year	2002	2001	2000
Funding	\$2,302,154	\$1,091,907	\$16,895

BUDGET SUMMARY

Survey Research Center, University of California, Berkeley

“Survey of Ventilation Practices and Housing Characteristics in New California Homes”

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$ 166,984
2.	Subcontractors	\$ 161,000
3.	Equipment	\$ 0
4.	Travel and Subsistence	\$ 1,148
5.	Electronic Data Processing	\$ 5,363
6.	Reproduction/Publication	\$ 19,617
7.	Mail and Phone	\$ 18,719
8.	Supplies	\$ 822
9.	Analyses	\$ 0
10.	Miscellaneous	<u>\$ 46,314¹</u>

Total Direct Costs \$419,967

INDIRECT COSTS

1.	Overhead	\$ 25,897
2.	General and Administrative Expenses	\$ 0
3.	Other Indirect Costs	\$ 0
4.	Fee or Profit	<u>\$ 0</u>

Total Indirect Costs \$ 25,897

TOTAL PROJECT COSTS **\$445,864**

¹ Miscellaneous costs include participant incentives, which have been found to be effective in increasing response rates in hard-to-reach population groups: cash incentives for focus group participants (\$600), a small gift such as post-it notes (\$5,715), and cash incentives for returned questionnaires (\$40,000). Depending on the feedback from focus groups, this questionnaire incentive may be reduced.

Attachment 1

SUBCONTRACTORS' BUDGET SUMMARY

Subcontractor: Lawrence Berkeley National Laboratory

Literature Review, Questionnaire Development, Data Analysis, Report Preparation, and Seminar Delivery

DIRECT COSTS AND BENEFITS

1. Labor and Employee Fringe Benefits	\$	76,929
2. Subcontractors	\$	0
3. Equipment	\$	0
4. Travel and Subsistence	\$	2,325
5. Electronic Data Processing	\$	0
6. Reproduction/Publication	\$	1,000
7. Mail and Phone	\$	500
8. Supplies	\$	1,050
9. Analyses	\$	0
10. Miscellaneous	\$	<u>28,638</u>

Total Direct Costs

\$ 110,442**INDIRECT COSTS**

1. Overhead	\$	49,249
2. General and Administrative Expenses	\$	0
3. Other Indirect Costs	\$	1,309
4. Fee or Profit	\$	<u>0</u>

Total Indirect Costs

\$ 50,558**TOTAL PROJECT COSTS**\$161,000

PROPOSED

State of California
AIR RESOURCES BOARD

Resolution 04-4

January 22, 2004

Agenda Item No.: 04-1-3

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code sections 39700 through 39705;

WHEREAS, a research proposal, number 2544-233, entitled "Hourly, In-situ Quantitation of Organic Aerosol Marker Compounds," has been submitted by the University of California, Berkeley;

WHEREAS, the Research Division staff has reviewed and recommended this proposal for approval; and

WHEREAS, the Research Screening Committee has reviewed and recommends for funding:

Proposal Number 2544-233 entitled "Hourly, In-situ Quantitation of Organic Aerosol Marker Compounds," submitted by the University of California, Berkeley, for a total amount not to exceed \$269,330.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code section 39703, hereby accepts the recommendation of the Research Screening Committee and approves the following:

Proposal Number 2544-233 entitled "Hourly, In-situ Quantitation of Organic Aerosol Marker Compounds," submitted by the University of California, Berkeley, for a total amount not to exceed \$269,330.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and contracts for the research effort proposed herein, and as described in Attachment A, in an amount not to exceed \$269,330.

ATTACHMENT A

“Hourly, In-situ Quantitation of Organic Aerosol Marker Compounds ”

Background

Regulatory efforts to achieve fine particulate matter (PM_{2.5}) standards require improvements in our knowledge of the factors controlling the concentration, size and chemical composition of PM_{2.5}. While many advances have been made in measuring and modeling the inorganic ionic species that are found in PM_{2.5}, much less is known about the organic fraction. Yet organic matter is a major constituent of airborne particles, comprising 20-40% of the PM_{2.5} mass in many regions. Quantitative knowledge of the composition of PM_{2.5} organic matter is key to tracing its sources and understanding its formation and transformation processes. Traditional methods for organic compound identification and quantification involve collection by filtration, with subsequent extraction and analysis by liquid or gas chromatography. However, organic analysis of extracts from filters requires large samples, typically milligrams of collected organic material. The cost is high, and generally the time resolution is poor. This research proposal will address the critical need for on-line, time-resolved, quantitative measurement of atmospheric PM_{2.5} organics at the molecular level.

Objective

The objectives of this research study are to demonstrate the capability of a new technique for hourly measurement of the organic composition of ambient PM_{2.5} aerosols, to deploy the instrument for one month in the summer and one in the winter at a site in California, and to analyze the combined data sets to resolve organic aerosol source contributions based on factor analysis.

Methods

This research study will be conducted in two phases. In Phase I, the investigators would test the performance of their on-line aerosol GC/MS (gas chromatography followed by mass spectrometry) instrument in a field campaign. The instrument development and field study are completely funded by the U.S. Department of Energy (DOE). In Phase I, the investigators will prepare a written report for the ARB providing evidence that the new instrumentation is ready for field measurements in California. A small amount of ARB funding (less than \$10,000) will be used for Phase I to prepare the written report. Upon ARB's approval for continuation of the study, in Phase II, the investigators will deploy the instrument for measurements during one winter and one summer field campaign in order to investigate seasonal differences in organic aerosol sources and potential new source tracers. The field component of this research study includes 22-23 hourly samples per day, collected over a period of four weeks at during each deployment, which should result in approximately 600 samples per deployment. With quantitative data, at minimum, for 20 organic compounds per sample, this would provide 12,000 concentration values that can be used for the determination of organic particulate sources. This data density is much higher than ever achieved in past studies, and accordingly will provide a more robust data set for source apportionment data analysis.

Expected Results

The results of all parts of the project will be documented as a technical report submitted to ARB and as technical papers submitted to peer-reviewed journals. The investigator will provide to the ARB electronic copy of all the data collected during this research contract. The investigator will also present the results of the project to ARB staff at two 1-hour long technical seminars, one in Sacramento and the second in El Monte.

Significance to the Board

This research proposal will address the critical need for on-line, time-resolved, quantitative measurement of atmospheric PM_{2.5} organics at the molecular level. The sampling approach provides time-resolution not possible through filter sampling, while avoiding many of the well-documented artifacts associated with filter collection and sample storage and transport. This research will provide useful new data of immediate value for air quality attainment strategies for the Central Valley and the development of the State Implementation Plan.

Contractor:

University of California, Berkeley

Contract Period:

24 Months

Principal Investigator (PI):

Professor Allen Goldstein

Contract Amount:

\$269,330

Cofunding:

No co-funding but this project will be highly leveraged by approximately \$500,000 support from Department of Energy in Phase I.

Basis for Indirect Cost Rate:

The State and UC System have agreed to a ten percent indirect cost rate.

Past Experience with this Principal Investigator:

This Principal Investigator has performed very successfully on past contracts. Professor Allen Goldstein has experience in quantifying organic compounds and Dr. Susanne Hering has extensive experience in particle measurement and developing and refining PM sampling techniques. Both investigators have extensive experience in building automated methods for continuous, unattended operation in the field and their research studies are well-published.

Prior Research Division Funding to UCB:

Year	2002	2001	2000
Funding	\$2,302,154	\$1,091,907	\$16,895

BUDGET SUMMARY

University of California, Berkeley

"Hourly, In-situ Quantitation of Organic Aerosol Marker Compounds"

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$133,532
2.	Subcontractors	\$ 90,000
3.	Equipment	\$ 0
4.	Travel and Subsistence	\$ 10,000
5.	Electronic Data Processing	\$ 0
6.	Reproduction/Publication	\$ 1,500
7.	Mail and Phone	\$ 500
8.	Supplies	\$ 13,000
9.	Analyses	\$ 0
10.	Miscellaneous	<u>\$ 3,500</u>

Total Direct Costs \$252,032

INDIRECT COSTS

1.	Overhead	\$ 17,298
2.	General and Administrative Expenses	\$ 0
3.	Other Indirect Costs	\$ 0
4.	Fee or Profit	<u>\$ 0</u>

Total Indirect Costs \$17,298

TOTAL PROJECT COSTS

\$269,330

Attachment 1

SUBCONTRACTORS' BUDGET SUMMARY

Subcontractor: Dr. Susanne Hering, Aerosol Dynamics Inc.

Description of subcontractor's responsibility: Subcontractor will work closely with UCB on the 2004 summer field study (Phase I), the two field deployment of the aerosol GC/MS systems during Phase II, and the subsequent source attribution efforts.

DIRECT COSTS AND BENEFITS

1.	Labor and Employee Fringe Benefits	\$80,315 ¹
2.	Subcontractors	\$ 0
3.	Equipment	\$ 0
4.	Travel and Subsistence	\$ 6,707 ²
5.	Electronic Data Processing	\$ 0
6.	Reproduction/Publication	\$ 0
7.	Mail and Phone	\$ 0
8.	Supplies	\$ 2,978
9.	Analyses	\$ 0
10.	Miscellaneous	<u>\$ 0</u>
	Total Direct Costs	<u>\$90,000</u>

INDIRECT COSTS

1.	Overhead	\$ 0
2.	General and Administrative Expenses	\$ 0
3.	Other Indirect Costs	\$ 0
4.	Fee or Profit	<u>\$ 0</u>

Total Indirect Costs

TOTAL PROJECT COSTS \$90,000

¹ Salary funds are requested for Dr. Susanne Hering to work 80 hours per year, Dr. Nathan Kreiberg to work 160 hours per year, and a research scientist to work 180 hours per year on this project for two years.

² Travel and subsistence are requested for two field campaigns of one-month duration each.

TITLE 13. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO REGULATIONS FOR THE AVAILABILITY OF CALIFORNIA MOTOR VEHICLE SERVICE INFORMATION

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider the adoption of amendments to regulations regarding the availability of motor vehicle service information in California.

DATE: January 22, 2004

TIME: 9:00 am

PLACE: California Environmental Protection Agency
Air Resources Board
Central Valley Auditorium, Second Floor
1001 I Street
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., January 22, 2004, and may continue at 8:30 a.m., January 23, 2004. This item might not be considered until January 23, 2004. Please consult the agenda for the meeting, which will be available at least 10 days before January 22, 2004, to determine the day on which this item will be considered.

The facility is accessible to persons with disabilities. If you have special accommodation or language needs, please contact the ARB's Clerk of the Board at (916) 322-5594 or sdorais@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

**INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT
OVERVIEW****Sections Affected:**

Amendment of title 13, California Code of Regulations (CCR), division 3, chapter 1, Motor Vehicle Pollution Control Devices; article 2, Approval of Motor Vehicle Pollution Control Devices (New Vehicles), section 1969, Motor Vehicle Service Information – 1994 and Subsequent Model Passenger Cars, Light-Duty and Medium-Duty Vehicles, and the document incorporated therein, "Society of Automotive Engineers (SAE)

Recommended Practice J2534, "Recommended Practice for Pass-Thru Vehicle Programming," January 2004, and incorporation by reference of the following documents: The Maintenance Council's Recommended Practice RP1210A, "Windows™ Communication API," July 1999, and SAE J2403, "Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature," October 1998.

Background

Senate Bill 1146 (SB 1146), enacted in 2000 and principally codified at Health and Safety Code section 43105.5, directed the ARB to develop service information regulations no later than January 1, 2002. The legislation requires all manufacturers of 1994 and later model vehicles equipped with second generation, on-board diagnostic systems (OBD) to make available for purchase emission-related service information to independent service facilities and the aftermarket parts industry. On December 13, 2001, the Board approved adoption of the ARB's service information regulation, which was formally implemented on March 30, 2003.

The regulation ensures that California service technicians have access to all service information literature, OBD descriptions and diagnostic information, training, and tools necessary to effectively diagnose and repair emission-related malfunctions. The regulation also requires vehicle manufacturers to make the information and tools available to aftermarket parts manufacturers to better ensure the availability of emissions-related replacement parts. Motor vehicle manufacturers are required under the regulation to make all text based service information available directly over the Internet. They are also required to make available for sale diagnostic tools that are supplied to their franchised dealerships. The data stream information on which these tools are based must also be made available to aftermarket diagnostic tool manufacturers to enable them to incorporate comparable emission-related functions into their tools. The regulation mandates that the prices charged by the vehicle manufacturers for the above information and tools must be fair, reasonable, and nondiscriminatory. Pursuant to the regulation, all light- and medium-duty vehicle manufacturers currently have operational service information websites on the Internet.

At the time the Board adopted the service information regulation, it directed the staff to monitor the implementation and effectiveness of the regulation, and to report back to the Board with necessary amendments within two years. Over the last two years, the ARB staff has worked with vehicle manufacturer and independent service industry stakeholders, and is proposing amendments to address an unresolved issue from the December 2001 Board hearing. The staff is further proposing amendments to the regulation that expand the scope of the regulation to heavy-duty vehicles equipped with OBD systems.

In drafting the regulatory amendments, the ARB staff met with engine and vehicle manufacturers, aftermarket parts manufacturers, trade associations and other interested

parties in various meetings and via phone calls. Staff issued Mail-Out MSO #2003-03 on July 7, 2003, which explained staff's proposed amendments to the service information regulation. Several written comments were submitted to the ARB in response to the mail-out and were considered in the development of the final proposal. Following the issuance of the mail-out, the staff also held a public workshop on August 14, 2003, to discuss the draft proposal. Representatives from both the vehicle manufacturing and aftermarket industries attended, and provided comments and testimony.

Proposed Amendments

Below is a summary of the staff's proposed amendments for consideration by the Board:

Testing Remanufactured On-Board Computers Equipped with Immobilizers

At the December 2001 Board hearing, significant discussion took place on the subject of passive anti-theft systems otherwise known as immobilizers. Specifically, the discussion focused on whether remanufacturers of on-board computers were entitled under SB 1146 to immobilizer initialization information necessary to facilitate bench testing of remanufactured immobilizer equipped computers. The Board adopted staff's recommendation that the statute did not provide on-board computer remanufacturers with the right of access to specialized immobilizer initialization information. Nonetheless, the Board directed the staff to work with stakeholders to determine if there were ways for remanufacturers to effectively bench test rebuilt computers with immobilizer circuitry without compromising motor vehicle security.

Over the past two years, the ARB staff has held several discussions with vehicle manufacturers and on-board computer remanufacturers. Based on these discussions, the staff believes that a reasonably practical, cost-effective, and secure solution is available that will work with most vehicle manufacturers' on-board computer designs. The solution centers on the use of generic scan tools and other low-cost tools and equipment that would allow on-board computer remanufacturers to use repair industry initialization procedures to bench test rebuilt computers. Under the recently finalized amendments to federal service information requirements, vehicle manufacturers must provide these low-cost initialization methods for use by aftermarket service technicians. (40 Code of Federal Regulations (CFR), Part 86, section 86.096.38(g)(6).) These same methods can be adapted by on-board computer remanufacturers for their testing purposes. To further ensure the availability of these procedures in California, the ARB staff is proposing to amend the California regulation to include language similar to that in the federal service information rule. The amendment should also reduce immobilizer reinitialization costs for the vehicle service industry.

Heavy-Duty Applicability

The ARB is currently in the midst of developing requirements for all 2007 and later model year heavy-duty vehicles (i.e., vehicles weighing more than 14,000 pounds gross vehicle weight rating) to be equipped with OBD systems. Because OBD is an important tool used to diagnose and repair vehicles, staff is proposing an amendment to require manufacturers of heavy-duty engines and transmissions to make service information and tools available for purchase.

Minor revisions to the requirements, as they would apply to heavy-duty manufacturers, are included in the staff's proposal to reflect inherent differences between the light- and heavy-duty vehicle industries. The differences include an option for heavy-duty manufacturers to require users of diagnostic tools to be trained in their proper use as a condition of sale. Staff also proposes to allow the heavy-duty industry to use standardized practices for reprogramming and nomenclature already in existence for the industry.

J2534 Update

The existing regulation requires on-board computer reprogramming for 2004 and later model year light-/medium-duty vehicles to be in compliance with the Society of Automotive Engineers (SAE) J2534, which is incorporated by reference into title 13, CCR, section 1969(f)(3)(A). To address minor implementation issues that have arisen with the introduction of reprogramming equipment for 2004 model year vehicles, the SAE has amended the J2534 protocol by adding further detail and clarification. The staff is proposing that the most recent version of SAE J2534 document be incorporated into the regulation.

Other Modifications

Minor modifications are proposed to further harmonize the regulation with current federal service information requirements, to clarify existing requirements, and to improve the effectiveness of the regulation.

Comparison with Federal Regulations

The United States Environmental Protection Agency (U.S. EPA) approved amendments to its service information regulation on May 30, 2003. (See 40 Code of Federal Regulations part 86, sections 86094.38 et seq.) The amended federal rule, with one significant exception, is very similar to the ARB's existing regulation, including requirements for service information to be made available over the Internet and for the availability of diagnostic tools and training information. The primary difference between the two regulations is that the existing ARB service information regulation provides that the aftermarket parts industry is entitled to information and tools; the federal regulation

ensures information access only to the service and repair industry. The broader scope of the California regulation was directed by the mandates of SB 1146.

The ARB and the U.S. EPA have worked towards harmonization to ensure that federal and state requirements do not conflict. With the staff's proposal, the regulations would continue to be similar with respect to most requirements. Some differences would, however, continue to exist. Most significantly, in accord with the directives of SB 1146 and other Health and Safety Code provisions, the scope of the California regulation would continue to apply to the aftermarket parts industry. Additionally, the regulation would be broadened under staff's proposal to include heavy-duty engine and transmission manufacturers. Federal requirements apply only to light- and medium-duty manufacturers (as defined under California regulations).

BENEFITS OF THE PROPOSAL

The ARB staff's proposal would help ensure that the heavy-duty vehicle service industry has access to adequate information, tools, and replacement parts necessary to diagnose and repair emission-related malfunctions. The proposed amendments will help to maximize the emission benefits to be realized by stringent 2007 and later model year emission standards for heavy-duty vehicles and the ARB's future OBD regulation for such vehicles. By 2010, the ARB projects that new heavy-duty diesel emission standards will reduce oxides of nitrogen and particulate matter statewide by 48.0 and 2.7 tons per day, respectively.

The proposal would also help to ensure that on-board computer remanufacturers have access to adequate information and tools to continue their business. The availability of lower cost replacement parts, including on-board computers, will increase the likelihood of prompt repairs when emission-related malfunctions do occur.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The ARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the potential environmental and economic impacts of the proposal, and supporting technical documentation. The staff report is entitled: "Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider Amendments to Regulations for the Availability of California Motor Vehicle Service Information."

Copies of the ISOR and full text of the proposed regulatory language, in underline and strike-out format to allow for comparison with the existing regulations, may be accessed on the ARB's website listed below or may be obtained from the ARB's Public Information Office, Visitors and Environmental Services Center, 1001 I Street, First

Floor, Sacramento, California 95814, (916) 322-2990, at least 45 days prior to the scheduled hearing (January 22, 2003).

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the ARB's web site listed below.

Inquiries concerning the substance of the proposed regulations may be directed to the designated agency contact persons: Dean Hermano, Air Resources Engineer, at (626) 459-4487, or Allen Lyons, Chief, Mobile Source Operations Division at (626) 450-6156.

Further, the agency representative and designated back-up contact person to whom non-substantive inquiries concerning the proposed administrative action may be directed are respectively Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, and Alexa Malik, Regulations Coordinator, (916) 322-4011. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the agency contact persons.

If you are a person with a disability and desire to obtain this document in an alternative format, please contact the ARB's Clerk of the Board at (916) 322-5594 or sdorais@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

This notice, the ISOR and all subsequent regulatory documents, including the Final Statement of Reasons (FSOR), when completed, are available on the ARB Internet site for this rulemaking at <http://www.arb.ca.gov/regact/cmvsip04/cmvsip04.htm>

COSTS TO PUBLIC AGENCIES AND TO BUSINESS AND PERSONS AFFECTED

The determinations of the Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulations are presented below.

The Executive Officer has determined pursuant to Government Code section 11346.5(a)(5) that the amendments will not create costs or mandates to any local agency or school district whether or not reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary savings to local agencies. The Executive Officer has further determined pursuant to Government Code section 11346.5(a)(6) that the proposed regulatory amendments will not create any costs or savings to any state agency, or any cost to any local agency or school district that is required to be reimbursed under Part 7

(commencing with section 17500), of division 4, or other nondiscretionary cost or savings imposed on local agencies, or any cost or savings in federal funding to the state.

The Executive Officer has also made an initial determination that the proposed action will not have a significant, statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

The Executive Officer has further determined that there should be insignificant, potential direct cost impacts, as defined in Government Code section 11346.5(a)(9), on representative private persons or businesses acting in reasonable compliance with the proposed action. The proposed service information regulation will directly affect approximately 30 heavy-duty engine and transmission manufacturers. Although heavy-duty engine and transmission manufacturers would incur costs to comply with the regulation, some or all of these costs may be recoverable through the sale of service information and tools. The proposed amendments would likely have a small positive cost impact on independent service repair facilities and aftermarket part manufacturers that do business in California because of the greater availability of service information and tools. Although the proposed amendments may indirectly have some adverse cost impacts on heavy-duty vehicle franchised dealerships and service networks in California through the loss of some repair business to independent service facilities, the impact would be the result of increased competition, consistent with the intent of the Legislature in drafting SB 1146.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not result in the elimination of jobs or elimination of existing businesses within the State of California.

The Executive Officer has determined that the proposed action may possibly create some jobs, create new businesses, or promote the expansion of businesses currently doing business within California. An assessment of the economic impacts of the proposed regulatory action can be found in the staff report.

The Executive Officer has further determined, pursuant to Government Code sections 11346.3(c) and 11346.5(a)(11), that the regulatory requirements for motor vehicle manufacturers to file reports are necessary for the health, safety, or welfare of the people of the state.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will affect small business. Small businesses in the aftermarket service and parts industries should be positively affected by the availability of service information and tools. And, as noted above, while some heavy-duty vehicle

d alerships and service network facilities may be adversely affected by the potential for increased competition, this result was the intent and purpose of SB 1146.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the agency or that has been otherwise identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed, or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by e-mail before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received **no later than 12:00 noon, January 21, 2004**, and addressed to the following:

Postal Mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to: cmvsip04@listserv.arb.gov and received at the ARB by no later than **12:00 noon, January 21, 2004**.

Facsimile submissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB no later than **12:00 noon, January 21, 2004**.

The Board requests, but does not require, 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring any suggestions for modification of the proposed regulatory action to the attention of staff in advance of the hearing.

STATUTORY AUTHORITY

This regulatory action is proposed under the authority granted to the ARB in California Health and Safety Code sections 39600, 39601, 43000.5, 43018, 43105.5, and 43700. This action is proposed to implement, interpret or make specific sections 39027.3, 43104, and 43105.5 Health and Safety Code.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non-substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public adequately has been placed on notice that the regulatory language as modified could result from the proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, for at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Visitors and Environmental Services Center, 1001 I Street, First Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD


Catherine Witherspoon
Executive Officer

Date: November 24, 2003

State of California
AIR RESOURCES BOARD

STAFF REPORT: INITIAL STATEMENT OF REASONS
FOR PROPOSED RULEMAKING

**PUBLIC HEARING TO CONSIDER AMENDMENTS TO
REGULATIONS FOR THE AVAILABILITY OF CALIFORNIA MOTOR
VEHICLE SERVICE INFORMATION**

Date of Release: December 5, 2003
Scheduled for Consideration: January 22, 2004

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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Attachment – Proposed Amendments to the California Regulations to Title 13, California Code of Regulations, Chapter 1 Motor Vehicle Pollution Control Devices, Article 2 Approval of Motor Vehicle Pollution Control Devices (New Vehicles); Section 1969, Motor Vehicle Service Information – 1994 and Subsequent Model Passenger Cars, Light-duty Trucks, Medium-Duty Vehicles and Heavy-Duty Vehicles.

EXECUTIVE SUMMARY

The Air Resources Board (ARB or Board) staff is proposing to amend the regulation that requires the availability of emission-related service information for 1994 and later passenger cars, light-duty trucks, and medium-duty vehicles equipped with second generation On-Board Diagnostic (OBD) systems. This proposal is in accordance with the requirements of Senate Bill 1146 (SB 1146), which is principally codified at Health and Safety Code Section 43105.5. In December 2001, the Board approved for adoption an initial regulation implementing the provisions of SB 1146 as they apply to manufacturers of the above-identified vehicle classifications (title 13, California Code of Regulations section 1969 and title 17, California Code of Regulations sections 60060.1 through 60060.34). The existing service information regulation became effective on March 30, 2003.

Staff is now proposing that the regulation be broadened to include manufacturers of new heavy-duty engines and transmissions as their products become subject to OBD requirements that are separately under development by ARB staff. The staff has determined that the needs of the heavy-duty aftermarket industry for emissions-related service information and tools are substantially the same as for the aftermarket segments covered by the existing regulation. Access to comprehensive emission-related information and tools will allow the aftermarket service industry to remain competitive in the marketplace with dealership service centers and manufacturers of original equipment parts.

Under staff's proposal, most of the provisions of the regulation that now apply to light- and medium-duty vehicles would also apply to heavy-duty vehicles. The regulation would require text-based service information, such as service manuals, technical service bulletins, and training materials, to be made available for purchase over the Internet at fair, reasonable, and nondiscriminatory prices. It would also require that heavy-duty manufacturers offer for sale the same emission-related diagnostic tools that are used by dealership technicians, along with information necessary for the same diagnostic capabilities to be designed into generic aftermarket tools. The staff's proposal contains necessary adjustments to reflect differences between the light-duty and heavy-duty vehicle manufacturing and service industries.

The ARB staff is also providing an update on the issue of access to information needed to remanufacture on-board computers designed for vehicles equipped with "immobilizer" passive anti-theft systems. In approving the regulation in December 2001, the Board decided against adopting regulatory language that would require motor vehicle manufacturers to make immobilizer information available to on-board computer remanufacturers. However, recognizing the importance of lower-cost, replacement on-board computers, the Board directed the staff to work with both industries towards finding a solution that would provide remanufacturers with the information or equipment necessary to effectively bench test these rebuilt computers without compromising motor vehicle security.

After considerable discussion with manufacturer and aftermarket stakeholders, it appears that a viable solution to the computer remanufacturing issue is available through the use of "generic" re-initialization technology required by the recently amended federal service information requirements. The ARB staff is proposing a similar requirement to ensure that the basis for reasonably priced bench testing of remanufactured on-board computers continues to be in place.

Other minor modifications are also being proposed to harmonize with federal service information requirements and to assist with the implementation and enforcement of the overall regulation.

Except for heavy-duty manufacturers that would become subject to the regulation under the staff's proposal, the amendments to the regulation should not impact compliance costs. The staff has estimated that heavy-duty manufacturers' start-up costs for the development of a compliant heavy-duty website should be no more than \$500,000. Annual maintenance costs are estimated to be approximately \$225,000 or less. Affected manufacturers would be permitted by the regulation to set fair, reasonable, and non-discriminatory prices for the tools and information that must be made available under the regulation, thereby offsetting some or all of the compliance costs.

State of California
AIR RESOURCES BOARD

**Staff Report: Initial Statement of Reasons
For Proposed Rulemaking**

**PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CALIFORNIA
REGULATIONS FOR THE AVAILABILITY OF MOTOR VEHICLE SERVICE
INFORMATION**

Date of Release: December 5, 2003
Scheduled for Consideration: January 22, 2004

I. Introduction

Pursuant to the directives of Senate Bill (SB) 1146 (principally codified at Health and Safety Code Section 43105.5), the Air Resources Board (ARB or Board) adopted the California Motor Vehicle Service Information Regulation on December 13, 2001. The regulation ensures that independent service facilities and aftermarket part companies have access to information and tools necessary to diagnose and repair emission-related malfunctions and produce emission-related replacement parts. The regulation currently applies to manufacturers of 1994 model year and later passenger cars, light-duty trucks, and medium-duty vehicles equipped with second generation on-board diagnostic (OBD) systems. The regulation became effective on March 30, 2003.

In adopting the regulation in 2001, the Board directed, in Resolution 01-05, that staff report back to it in two years with a status update on the regulation's implementation and on outstanding issues regarding the ability of the aftermarket industry to access "immobilizer" passive anti-theft system information. The status report follows in sections IV. and V.(A.) of this document. In addition, staff is proposing amendments to expand the regulation's applicability to heavy-duty vehicle engines and transmissions. Lastly, the staff is proposing additional minor amendments to the regulation to improve the clarity and effectiveness of the regulation and to ensure consistency with recently promulgated federal service information requirements.

II. Background

The use of sophisticated emission control devices has allowed motor vehicle manufacturers to meet stringent emission standards necessary for California's attainment of ambient air quality goals. However, continued compliance with these low emission levels depends on the proper operation of the emission control systems built into the vehicles. Emission-related malfunctions can cause vehicle emission levels to greatly exceed certification standards. Current light- and medium-

duty vehicles sold in California are equipped with diagnostic OBD systems (known as OBD that detect the occurrence of these malfunctions.

When a malfunction is detected, the "check engine" or "service engine soon" light illuminates on the vehicle's instrument panel, and diagnostic information is stored in the on-board computer. Through the rapid identification and repair of emission-related problems, the lifetime emissions from motor vehicles can be minimized. However, because emission levels are not reduced until the vehicle is successfully repaired, it is critical that service technicians have access to the information and diagnostic tools necessary to effectively utilize OBD system information, and to carry out necessary repair work for identified problems. The availability of compatible aftermarket replacement parts is also important to the repair process. If there is not an adequate supply of needed replacement parts at reasonable prices, the repair of emission-related malfunctions may be postponed or carried out improperly.

III. Summary of Existing Regulation

Prior to the service information regulation, independent service facilities (i.e., those not directly affiliated with the vehicle manufacturers), did not always have access to dealership-quality information and tools. In response to concerns from aftermarket service facilities and parts manufacturers, SB 1146 was signed into law on September 30, 2000. The bill and the ARB's regulation, as codified in title 13, California Code of Regulations (CCR), section 1969 and title 17, CCR, sections 60060.1 through 60060.34, currently address service information availability for 1994 model year and later passenger cars, light-duty trucks, and medium-duty vehicles equipped with OBD systems.

A. Service Information

Most emission-related service information needed by independent service facilities and aftermarket part manufacturers consists of text-based information routinely used to complete service and repairs on consumer vehicles. Such information includes, but is not limited to, service manuals, technical service bulletins, troubleshooting manuals, and training materials. The regulation requires manufacturers to make available all emission-related service information that is available to franchised dealerships. The regulation specifically requires that text-based service information, at a minimum, be made available directly via the Internet.

B. On-Board Diagnostic System Descriptions

The regulation requires motor vehicle manufacturers to make available for purchase general descriptions of the design and operation of OBD systems for 1996 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles. These descriptions include the system's monitored parameters, diagnostic trouble codes, enabling conditions, monitoring sequence, and malfunction thresholds. Motor vehicle manufacturers must also make available identification and scaling information necessary to understand and interpret data accessible to generic scan tools under "mode 6" of the Society of Automotive Engineers (SAE) standard

J1979. This information helps service technicians better understand the conditions under which malfunctions are indicated. It also provides aftermarket part manufacturers with information that can be used to better ensure that both add-on and replacement parts are compatible with OBD systems.

C. Diagnostic Tools and Reprogramming Equipment

The regulation requires manufacturers to offer for sale the same emission-related diagnostic tools that are provided to franchised dealerships. This ensures the availability of dealership-quality tools to the aftermarket and provides for improved diagnoses and repair of emission-related malfunctions. If a manufacturer's tool includes both emission-related and non-emission-related information and diagnostic capabilities, the manufacturer has the option to make available to the aftermarket a version with only emission-related diagnostic functions.

In addition to offering for sale diagnostic tools that are provided to dealerships, the regulation requires motor vehicle manufacturers to make available emission-related enhanced data stream information¹ and bi-directional control information² to aftermarket tool manufacturers. This information enables automotive diagnostic tool manufacturers to incorporate similar functionality into their "generic" tools.

D. Immobilizer Information

Motor vehicle manufacturers are required to make available to the service and repair industry initialization procedures used by dealerships for vehicles equipped with integrated anti-theft systems known as immobilizers. A manufacturer is required to provide such procedures when necessary for installation of on-board computers, or for repair or replacement of other emission-related parts. An exemption from full compliance with this requirement may be granted through the 2007 model year if the manufacturer demonstrates that it needs the additional time to make design changes to the immobilizer system in order to ensure that disclosure of the procedures would not compromise vehicle security. Only one manufacturer has requested an exemption thus far. An issue related to the release of additional immobilizer information to rebuilders of on-board computers has been a concern since the December 2001 hearing. Background on this matter, and the ARB's proposals regarding the issue are detailed later in this staff report.

¹ "Enhanced data stream information" is defined as data stream information that is specific for an original equipment manufacturer's brand of tools and equipment. Data stream information available to technicians through a diagnostic tool typically consists of real time data from sensors and the on-board computer regarding the operating conditions of the vehicle.

² "Bi-directional control information" typically consist of commands issued by a technician using a scan tool to override normal vehicle operation in order to activate a device or computer routine for diagnostic purposes.

E. Cost of Service Information

The regulation requires that all covered information and diagnostic tools be offered for sale at "fair, reasonable, and nondiscriminatory prices" in order to stimulate competition between franchised dealerships and the aftermarket, and to ensure equal access to service information and tools. Actual prices for service information and tools are not specified by the ARB in the regulation. Instead, the factors listed below are to be used to evaluate the appropriateness of manufacturer's pricing policies:

- The net cost to the motor vehicle manufacturers' franchised dealerships for similar information obtained from motor vehicle manufacturers after considering any discounts, rebates or other incentive programs;
- The cost to the motor vehicle manufacturer for preparing and distributing the information, excluding any research and development costs incurred in designing, implementing, upgrading or altering the onboard computer and its software or any other vehicle component. Amortized capital costs may be included;
- The price charged by other motor vehicle manufacturers for similar information;
- The price charged by the motor vehicle manufacturer for similar information immediately prior to January 1, 2000;
- The ability of an average covered person to afford the information;
- The means by which the information is distributed;
- The extent the information is used in general and by specific users, which includes the number of users, and the frequency, duration, and volume of use;
- Inflation; and,
- Any additional criteria or factors considered by the United States Environmental Protection Agency (U.S. EPA) for the determination of service information costs under federal regulations.

The ARB staff will consider all relevant regulatory factors in making any determination that a manufacturer's set prices are not fair, reasonable, and non-discriminatory. Manufacturers must provide its pricing structures to the ARB, and periodic audits are conducted by the ARB to monitor manufacturer pricing policies.

F. Trade Secret Disclosure

The regulation contains provisions for manufacturers to withhold trade secret information that would otherwise have to be disclosed under the provisions of SB 1146. The regulation permits manufacturers to initially withhold information that it believes to be trade secret (as defined in the Uniform Trade Secret Act contained in title 5 of the California Civil Code). At the time information for vehicle models is made available, the motor vehicle manufacturer is required to identify on the website the information it has withheld as trade secret. Covered persons that believe the information is not a trade secret may request the motor vehicle manufacturer in

writing to make the information available. If resolution cannot be reached informally, the motor vehicle manufacturer would be required to petition the California superior court to obtain an exemption from disclosure.

G. Compliance Review Procedures

The regulation allows the ARB to review a motor vehicle manufacturer's compliance with these regulations by conducting periodic audits of motor vehicle manufacturer websites. A covered person may also request that the ARB conduct an audit. The ARB will conduct the audit if: (1) the request, on its face, establishes reasonable cause to believe that the manufacturer is in noncompliance with the regulation, and (2) the covered person has made reasonable efforts to resolve the matter informally with the manufacturer. In conducting audits, the ARB reviews all pertinent information provided by the covered person and the manufacturer. At the conclusion of the audit, the ARB will issue a written determination as to whether the motor vehicle manufacturer is in compliance with the statute and regulations.

If the ARB makes a determination that the motor vehicle manufacturer is not in compliance with the governing statute or regulation, a notice to comply will be issued to the motor vehicle manufacturer ordering it to remedy the non-compliance. The motor vehicle manufacturer has 30 days to either submit a compliance plan or request an administrative hearing to contest the notice. Any rejection of a manufacturer's compliance plan requires the Executive Officer to seek review of its determination by an administrative hearing officer.

H. Administrative Hearing Procedures

Health and Safety Code section 43105.5(f) requires the ARB to establish administrative hearing procedures for the review of Executive Officer determinations of non-compliance with the regulation. The hearing procedures for this purpose are provided in title 17, CCR, sections 60060.1 through 60060.34. After considering the record and arguments submitted by the parties, a hearing officer issues a written decision and order within 30 days. The hearing officer's decision is considered the final decision of the ARB, subject to review by the superior court.

I. Non-Compliance Penalties

The regulation authorizes the hearing officer to assess civil penalties against a manufacturer for continued noncompliance. Such penalties may be assessed if the manufacturer fails to come into compliance within 30 days from the date of a hearing officer's compliance order, or such later date that the hearing officer deems appropriate. The penalties can be as high as \$25,000 per violation per day that the violation continues.

IV. Status of Implementation

Currently, all major light- and medium-duty vehicle manufacturers have operational service information websites on the Internet. Most manufacturers offer time-based

subscriptions that range in length from 24 hours to a year. Eight manufacturers charge for service information per document, and two manufacturers are currently offering free access to emissions-related service information. Table 1 below contains a list of manufacturers' websites and access charges:

Table 1.
Service information Websites
(as of November 2003)

<u>Manufacturer</u>	<u>Website Address</u>	<u>Pricing</u>		
		<u>Short-Term</u>	<u>Month</u>	<u>Year</u>
Acura	https://www.serviceexpress.honda.com	\$20.00 (72 hr)	\$50.00	\$500.00
AM General*	http://www.amgeneralcorp.com	Documents Individually Priced		
Audi	http://erwin.audi.com	Documents Individually Priced		
BMW	http://www.bmwtechinfo.com	\$20.00 (24 hr)	\$300.00	\$2,500.00
Bentley*	http://www.bentleytechinfo.com	Documents Individually Priced		
Chrysler	http://www.techauthority.com	\$20.00 (24 hr)	\$200.00	N/A
Ferrari*	http://www.ferrariusa.com	Documents Individually Priced		
Ford	http://www.motorcraftservice.com	\$19.95 (72 hr)	\$299.95	\$2,499.95
General Motors	http://service.gm.com	\$20.00 (24 hr); \$45.00 (5 day)	\$150.00	\$1,200.00
Honda	https://www.serviceexpress.honda.com	\$20.00 (72 hr)	\$50.00	\$500.00
Hyundai	http://www.hmaservice.com	Free		
Infiniti	http://www.infinititechinfo.com	\$19.99 (24 hr)	\$299.98	\$2,499.98
Isuzu	http://www.isuzusource.com	\$20.00 (24 hr)	\$150.00	\$1,650.00
Jaguar	http://www.jaguartechinfo.com	\$20.00 (24 hr)	\$150.00	\$500.00
Kia	http://www.kiatechinfo.com	Free		
Lamborghini*	http://www.lamborghini.com	Documents Individually Priced		
Land Rover	http://www.landrovertechinfo.com	\$20.00 (24 hr)	\$150.00	\$500.00
Lexus	http://techinfo.lexus.com	\$10.00 (24 hr)	\$50.00	\$350.00
Mazda	http://www.mazdatechinfo.com	19.95 (24 hr), \$50.00 (72 hr)	\$900 (6 mo)	\$1,500.00
Maserati*	http://www.maseratiusa.com	Documents Individually Priced		
Mercedes-Benz	http://www.startekinfo.com	\$20.00 (24 hr)	\$300.00	\$2,500.00
Mini	http://www.minitechinfo.com	\$20.00 (24 hr)	\$300.00	\$2,500.00

<u>Manufacturer</u>	<u>Website Address</u>	<u>Pricing</u>		
		<u>Short-Term</u>	<u>Month</u>	<u>Year</u>
Mitsubishi	http://www.mitsubishitechinfo.com	\$19.95 (24 hr); \$99.95 (1 wk)	\$249.99; \$999.99 (6 mo)	\$1,499.95
Nissan	http://www.nissantechinfo.com	\$19.99 (24 hr)	\$299.98	\$2,499.98
Porsche	https://techinfo.porsche.com	\$110/document	N/A	\$5,200.00
Rolls-Royce*	http://www.rrtis.com	Documents Individually Priced		
Saab	http://www.saabtechinfo.com	\$10.00	\$75.00; \$180.00 (3 mo)	\$500.00
Subaru	http://techinfo.subaru.com	\$19.95 (72 hr)	\$299.95	\$2,499.95
Suzuki	http://www.suzukitechinfo.com	\$19.99 (24 hr)	\$99.99; \$299.99 (6 mo)	\$499.99
Toyota	http://techinfo.toyota.com	\$10.00 (24 hr)	\$50.00	\$350.00
Volkswagen	https://erwin.volkswagen.de	Documents Individually Priced		
Volvo	http://www.volvotechinfo.com	N/A	\$350.00	\$3,500.00

* Small volume manufacturer. Information is not required to be made available for online purchasing and viewing/downloading.

Overall, staff has found that the service information websites generally meet the requirements outlined in the regulation despite some minor startup problems. Thus far, the ARB staff has received only two complaints from covered persons regarding manufacturers' compliance with the regulation. The first involved the pricing of a motor vehicle manufacturer's service information and the other was about the inability of an independent service facility to purchase a manufacturer's enhanced diagnostic tool. Both matters were resolved informally without the need to pursue enforcement procedures outlined in the regulation.

V. Proposed Amendments

This section of the report describes the staff's proposed amendments to California's service information requirements. The staff's preliminary proposals were presented in ARB Mail-Out MSO #2003-03, and discussed at a public workshop held on August 14, 2003.

A. Immobilizers

ARB staff has worked closely with both motor vehicle manufacturers and representatives from the aftermarket towards resolving an issue regarding access to immobilizer information that was identified at the 2001 Board hearing.

1. Background

Most vehicle manufacturers currently install passive anti-theft devices, known as immobilizers, on at least a portion of their product offerings. These devices disable engine functions necessary for vehicle operation (e.g., fuel injection, or the ignition system) unless a transmitting device incorporated into the key sends the correct password to a receiver on the vehicle. If the vehicle's on-board computer needs to be replaced, the immobilizer system typically needs to be reinitialized so that the computer will recognize the code transmitted by the key. Other emission-related repairs may also require reinitialization of the immobilizer system.

Pursuant to Health and Safety Code section 43105.5 (a)(6), the service information regulation requires manufacturers to make their initialization procedures available to independent service technicians so that they will not be precluded from carrying out emission-related repair procedures that require immobilizer initialization (title 13, CCR, section 1969 (d)(3)). The aftermarket, however, believes that the regulation, as presently written, does not go far enough. They believe that remanufacturers of on-board computers (ECUs) are also entitled to special information and/or tools needed to temporarily bypass the ECU's immobilizer logic so that all on-board computer functions can be tested on a workbench after the remanufacturing process. Without such capabilities, the remanufacturers assert that they would be unable to continue to supply lower-cost, replacement on-board computers. Therefore, the only alternative for consumers would be new, more expensive replacement units available through manufacturers' dealerships.

Vehicle manufacturers disagree, contending that SB 1146 does not provide for special information to be created and made available to ECU remanufacturers. They assert that such a requirement could result in the release of information that would jeopardize the effectiveness of immobilizer systems in deterring vehicle theft.³ They further argue that the development of the specific information and tools desired by the remanufacturers would be costly and burdensome.

At the 2001 hearing, the staff's proposal to the Board did not include the special information requirements sought by the aftermarket remanufacturers. The staff concluded that the language of Health and Safety Code section 43105.5, when read together with the legislative history of SB 1146, did not require vehicle manufacturers to provide special initialization information necessary for bench testing remanufactured computers. After considerable discussion at the hearing, the Board adopted staff's proposed regulations without the requirement sought by remanufacturers. However, the Board expressed concerns about the continued availability of lower cost replacement ECUs. Consequently, the Board directed ARB staff to work with aftermarket and vehicle manufacturer stakeholders to determine if

³ The effectiveness of immobilizer designs is one criterion by which vehicle insurance costs are established in Europe. Motor vehicle manufacturers have stated that they use similar or identical immobilizer designs in the U.S. and Europe. Therefore, manufacturers argue that any release of information that could jeopardize immobilizer system effectiveness could translate into higher insurance costs for their vehicles overseas.

a feasible solution exists that would better facilitate bench testing of remanufactured on-board computers while protecting the security of immobilizer designs.

2. Discussion of Potential Solutions

Black Boxes, and Test Calibrations

Since the 2001 Board hearing, the ARB staff has engaged in continuing discussions and meetings with representatives from the on-board computer remanufacturing industry and motor vehicle manufacturers. Initial discussions focused on concepts proposed by computer remanufacturers. Specifically, the remanufacturers proposed that they be provided with "black box" devices that could be used on a test bench to disable immobilizer logic without providing the user of the device with any proprietary information on how the immobilizer works. Another concept discussed would be for vehicle manufacturers to develop special computer software that could be installed into remanufactured computers for testing purposes. The software would bypass immobilizer logic to allow for bench testing of the computer, but its parameters would be calibrated in a way that would keep the engine from operating reasonably if the computer was installed in a vehicle with the test software loaded. Vehicle manufacturers countered that black boxes and test calibrations would be expensive and burdensome to develop, and that they do not address concerns about reducing the effectiveness of immobilizer systems in-use.⁴

Potential solutions similar to the test calibration concept have also been discussed for application to future model year vehicles. These solutions would require manufacturers to develop special immobilizer-related subroutines into production release software that would disable the immobilizer's functions under very narrow operating conditions or in response to a command from a diagnostic scan tool. Manufacturers agree that such strategies are technically feasible and that focusing on future model year vehicles would reduce costs; however, they remain concerned that costs to develop and maintain these subroutines would be significant. They are also concerned, once again, that the subroutines may be exploited in the field to reduce the anti-theft effectiveness of their immobilizer strategies.

Manufacturer-Authored Bench Test Procedures

Vehicle manufacturers have offered a solution that is based on the procedures the service industry uses, which are already available under the regulation to initialize the immobilizer system when an ECU is replaced or when additional keys are made for a vehicle. The manufacturers would provide instructions to the ECU remanufacturers on how to set up a test bench by connecting together a vehicle's critical immobilizer-related devices. Such a setup would typically include the receiver for the key's signal, the ECU, the anti-theft

⁴ These concepts were presented to the Board in more detail in a memorandum from the Executive Officer, dated November 13, 2002, "California Motor Vehicle Service Information Rulemaking Status (Agenda Item No. 01-10-1): Immobilizers"

module (if separate from the ECU), the manufacturer's diagnostic scan tool, and necessary wiring between the devices. With the test bench, a remanufacturer would be able to initialize the immobilizer system in the same way a service technician would when making vehicle repairs.

ECU remanufacturers have two related concerns regarding the manufacturers' proposal. First, some manufacturers' immobilizer initialization procedures incorporate a waiting period of up to 30 minutes to make use of the procedure to steal a car impractical. Remanufacturers say the delay greatly reduces the volume of computers that can be tested on the bench, restricting their ability to carry out their business. The impact of the delay can be avoided by setting up multiple test benches that would work in parallel. However, remanufacturers say their second concern, the cost of creating a test bench, makes the idea of setting up multiple benches economically infeasible.

The primary cost associated with the test bench setup is the need for a manufacturer's scan tool, which can often be in excess of \$5,000 each. However, a requirement recently finalized by the U.S. EPA with respect to federal service information rules will eliminate the need for expensive dealer tools. The federal requirement (Title 40, Code of Federal Regulations, Part 86, section 86.096.38(g)(6)) requires vehicle manufacturers to develop service procedures for immobilizer initialization that do not require the use of manufacturer scan tools or other special tools. Instead, the manufacturers are to rely on generic aftermarket tool capabilities, the SAE J2534 "pass through" reprogramming platform⁵, or inexpensive manufacturer specific data cables. While the federal provision was not adopted for the benefit ECU remanufacturers, they will be able to take advantage of generic tools that vehicle manufacturers will be required to provide. This should enable the ECU remanufacturers to perform multiple bench tests that facilitate remanufacturing and testing of computers in reasonable volumes and at reasonable cost.

The U.S. EPA requirement applies to 1996 and later model year vehicles that use immobilizers. Like the ARB's service information regulation, the federal rulemaking provides for an exemption through the 2007 model year for manufacturers that can demonstrate that development of a immobilizer initialization procedure based on common tools will increase the chances of vehicle theft. To date, the U.S. EPA has received four exemption requests. These four manufacturers account for only approximately 16 percent of light- and medium-duty vehicle sales in California. Therefore, in addition to current and future model year vehicles, the generic initialization concept can be used for a wide range of existing vehicle models.

⁵ Title 13, CCR, Section 1969(f)(3)

3. Summary and Proposals

At this time, staff believes that manufacturer bench test initialization procedures using commonly available tools appears to offer a reasonably priced and acceptably practical method to facilitate bench testing of remanufactured computers. The staff believes that refinements to such procedures and the tools needed to carry them out will likely occur over time, further reducing associated costs and resources. The staff also believes that other and possibly more efficient solutions to this issue may be reached through continued cooperation between vehicle manufacturers and on-board computer remanufacturers.

The staff's proposed regulatory amendments include regulatory language similar to the federal requirements discussed above to further ensure the availability of common tools to carry out immobilizer initialization (title 13, CCR, section 1969(d)(3)). Such tools are key to reducing the cost and burden of bench test procedures based on immobilizer-related vehicle repair procedures. The tools will also help to minimize immobilizer-related costs within the vehicle service industry.

B. Heavy-Duty Engine/Vehicle Applicability

1. Background

In October 2001, the ARB adopted new emission standards for on-road heavy-duty engines and vehicles⁶ that will reduce oxides of nitrogen and particulate matter by 90% compared to 2004 emission standards. Compliance with the 2007 standards will require manufacturers to implement sophisticated emission controls on new engines including aftertreatment-based technologies such as particulate filters and lean oxides of nitrogen (NOx) catalysts. Manufacturers will also be required to implement crankcase filtering/ventilation technologies.

Similar to the light-duty, gasoline-powered fleet in California, achievement of maximum in-use reductions from these emission control technologies will depend on their continued proper performance throughout the actual life of the engines. The ARB staff is currently in the process of developing separate OBD requirements for heavy-duty vehicles meeting these stringent standards to ensure that emission-related malfunctions are properly identified and repaired. A proposed rulemaking is expected to occur in 2004.

2. Need for Service Information Access

With the coming reliance on advanced emission controls and on-board diagnostic systems, the need for accurate and complete emissions-related service information, and access to adequate diagnostic tools has become more critical. To address this need and the requirements of Health and Safety Code section 43105.5,

⁶ Pursuant to title 13, CCR, section 1900(a)(6), heavy-duty vehicles are defined as motor vehicles with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

the ARB staff is proposing that California's service information requirements be amended to include heavy-duty, OBD-equipped engines and transmissions used with such engines.

ARB staff estimates based on available Department of Motor Vehicles data that approximately 520,000 heavy-duty trucks are registered in California. Federal statistics indicate that only about 11 percent of general heavy-duty truck maintenance and about 24 percent of major overhauls are performed at manufacturers' dealerships. Independent garages and fleet maintenance facilities conduct the majority of such repair work.⁷ Therefore, although heavy-duty vehicles make up only 2 to 3 percent of California's on-road vehicle fleet, hundreds of thousands of heavy-duty vehicles rely on service providers not affiliated with dealerships.

Independent heavy-duty service industry stakeholders have indicated that access to service and parts information electronically, and specifically over the Internet, is important to facilitate efficient heavy-duty vehicle repair work. The American Trucking Association's Technology and Maintenance Council (TMC) conducted a survey in which 86 percent of respondents indicated that technicians spent too much time trying to find service and parts information. Nearly 90 percent responded that a single source of on-line service and parts information would be an important improvement to their service repair work.

Input received by ARB staff during its August 14, 2003, public workshop indicates that heavy-duty engine and transmission manufacturers typically make service information available in hard-copy and/or electronic formats to independent service providers. Further, with a few exceptions, information regarding diagnostic tool functionality is also shared on a wide scale. Expanding the applicability of California's service information requirements to these vehicles would ensure that emissions-related information and tools are available for all California trucks.

3. Authority

The directives of the Health and Safety Code, and specifically SB 1146, require that the provisions of title 13, CCR, section 1969 be broadened to include OBD-equipped, heavy-duty vehicles. Health and Safety Code Section 43105.5(a) provides that the service information regulation apply to "all 1994 and later model-year motor vehicles equipped with on board diagnostic systems...and certified in accordance with the test procedures adopted [by the ARB]." While SB 1146 refers only to "motor vehicles" and "motor vehicle manufacturers," and does not reference "engines" or "engine manufacturers," the engine manufacturer is the party primarily responsible for equipping a manufactured vehicle with an OBD system and for certifying the engine and OBD system with the ARB. Being the certifying manufacturer of the vehicle's engine, engine manufacturers develop and control most emissions-related service information and tools used to maintain and repair heavy-duty vehicles.

⁷ United States Census Bureau: "1997 Economic Census Vehicle Inventory and Use Survey."

The purpose and intent of SB 1146 is to ensure the availability of service information and tools to the aftermarket service and parts industry for the proper maintenance and repair of OBD-equipped vehicles at competitive and reasonable prices. It is unquestionable that the sophistication of OBD systems – whether incorporated as part of a light, medium, or heavy-duty vehicle – and their impact on vehicle servicing and aftermarket parts was the catalyst for the widespread and strong support of SB 1146 from the automotive aftermarket. Moreover, the service information rule as initially adopted in 2001 applies to both light- and medium-duty vehicles, the latter of which includes several engine-certified vehicles. At that time, engine manufacturers never objected to the inclusion of such engine-certified vehicles in the service information regulation.

Beyond the explicit authority set forth in SB 1146, Health and Safety Code sections 43000.5(d), 43018(a), and 43700(d) direct the ARB to obtain maximum emission reductions from heavy-duty vehicles at the earliest practicable date. These provisions specifically recognize the unique emissions contribution of heavy-duty vehicles to the state's air quality problem. Providing necessary information and tools to independent heavy-duty vehicle service facilities will enable California-certified, heavy-duty vehicles to be better maintained and capable of continuing to meet the increasingly stringent certification emission standards in-use. This will help ensure that such emission reductions are indeed being achieved and maintained.

4. Differences in the Heavy-Duty Industry

Staff recognizes that differences do clearly exist in how most heavy-duty vehicles are constructed and serviced as compared to light- and medium-duty vehicles. Engine and transmission manufacturers have commented that these differences need to be taken into account in attempting to apply the current service information requirements to heavy-duty vehicles.

As compared to the light-duty motor vehicle industry, the heavy-duty industry is mostly non-integrated. This means that separate manufacturers typically produce the engine, transmission, and chassis of a vehicle. Non-integration exists primarily because the completed vehicle is typically produced in response to owner/operator specifications and preferences. Because of this lower level of integration, heavy-duty vehicles, in contrast to light-duty cars and trucks, are more often serviced by repair facilities that specialize in various subparts of the truck (engine shops, transmission shops, etc.).

The lack of integration also means that a given engine model will ultimately be part of many different engine, transmission, and chassis combinations. Heavy-duty manufacturers have stated that diagnostic tool designs differ significantly from tools produced for light-duty vehicles as a result of this diversity. Specifically, the tools provide a wide array of user selectable options that permit technicians to optimize truck operation based on factors such as the engine and transmission combination, axle ratios, and wheel sizes. It is important for service technicians to

understand how to properly utilize this flexibility. The manufacturers state that improper selection of configuration options can degrade truck performance to the point where on-road safety is at issue. For this reason, engine and transmission manufacturers have told the ARB staff that special training is considered essential for technicians using heavy-duty vehicle diagnostic equipment. Most manufacturers currently require service providers to complete such training before they will sell them their diagnostic tools. Finally, the industry standards by which the tools and reprogramming equipment communicate with heavy-duty vehicles are also different from those developed for light-duty vehicles.

5. Proposals for Inclusion of Heavy-Duty Vehicles

The ARB staff is proposing to expand the applicability of title 13, CCR, section 1969 to include heavy-duty engine, vehicle, and transmission manufacturers. Implementation of the requirements would not be mandatory until such time that heavy-duty engines are certified to meet OBD requirements. OBD requirements for heavy-duty vehicles are currently under consideration. Although the ARB's proposals are still in the development phase, it is not expected they will be implemented prior to the 2007 model year.

The scope of the proposed service information regulation as it applies to heavy-duty vehicles is limited to emissions-related information and tools. Engine manufacturers would be responsible for complying with the bulk of the regulation, providing access to text-based service information, OBD descriptions, reprogramming information, and diagnostic tools. Transmission manufacturers would be responsible only for information and tools that deal with OBD-related transmission components and subsystems (e.g., transmission shift solenoids or transmission speed sensors).

With respect to diagnostic tools and reprogramming equipment, the staff's proposal for heavy-duty manufacturers is largely similar to the current requirements for light- and medium-duty vehicles. That is, the manufacturers would be required to make available for sale the diagnostic tools and equipment that they provide to their dealerships, and they would also be required to provide aftermarket tool and equipment companies with data stream and bi-directional control information so that companies will be able to develop the same functionality into their own tools. In recognition of manufacturers' concerns regarding the impact of potential misuse of such tools and equipment, the staff is proposing regulatory language that would permit heavy-duty engine and transmission manufacturers to require certain terms be met before its tools, equipment, and data stream and bi-directional control information can be purchased. Prior to the sale of enhanced tools and equipment to covered persons, heavy-duty manufacturers may require that they participate in training on use of its tools and equipment, comparable to the training programs the manufacturer may now offer to its authorized service networks. As a condition of purchase of enhanced data stream and bi-directional control information, engine and transmission manufacturers may also require that aftermarket tool and equipment manufacturers provide mandatory training to ultimate purchasers of the tools and equipment that use the manufacturer's

information. Such training may include instruction on the proper handling of the tool and equipment as it applies to the engine or transmission at issue.

In order to minimize costs for equipment necessary to reprogram on-board computers, the ARB's service information regulation requires, for light- and medium-duty vehicles, that manufacturers comply with the SAE J2534 industry standard, "Recommended Practice for Pass-Thru Vehicle Programming."⁸ Heavy-duty manufacturers have stated that their segment of the industry has developed its own standard (TMC Recommended Practice RP1210A, "Windows™ Communication API") for reprogramming, and that any requirement for standardized reprogramming of heavy-duty vehicles should be based on this standard. The ARB staff agrees that there is no need for the reprogramming standards for the light- and heavy-duty vehicle fleets to be the same since the vehicles are typically not serviced at the same location. Further, the RP1210A standard is already in use and familiar to the heavy-duty service industry. Therefore, the staff is proposing that the heavy-duty reprogramming standard be incorporated by reference in the regulation for use by heavy-duty manufacturers. For the same reasons, the staff is also proposing that heavy-duty manufacturers be permitted to use the terms and acronyms specified in SAE J2403, "Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature," for heavy-duty service literature instead of SAE J1930, which specifies terms and acronyms for light- and medium-duty service information.

ARB staff's proposal would require direct access to heavy-duty service information over the Internet, as is presently required for light- and medium-duty vehicle classes currently covered by the regulation. Staff believes the advantages offered by online access (i.e., quick and convenient access) are beneficial and desired by independent heavy-duty service providers and parts makers. Such online access to service information is specifically required by SB 1146.⁹ Heavy-duty engine and transmission manufacturers already offer direct online access to at least some of their service information and others offer the ability to order service publications online.¹⁰ Current provisions for small-volume exemptions from full Internet compliance would also be extended to heavy-duty engine and transmission manufacturers selling on average less than 300 units annually in California.

Costs associated with the staff's proposal for heavy-duty vehicles are discussed in section VI.(C.)(2.) of this staff report.

C. Other Amendments

Other minor amendments are proposed by the staff to harmonize the ARB's regulation with federal service information requirements and to assist the ARB in the implementation and enforcement of its own regulation. The more significant

⁸ Title 13, CCR, Section 1969(f)(3)

⁹ Health and Safety Code Section 43105.5(a)(1)

¹⁰ Examples include Detroit Diesel (www.detroitdiesel.com/public/ddc_cust/ddc_cust.asp), Mack (www.macktrucks.com), and Allison Transmissions (www.allisontransmission.com/service)

amendments are summarized below. All proposed amendments are indicated in the draft regulatory language in the attachment to this report.

1. Monitor Specific Drive Cycles

The existing service information regulation in title 13, CCR, section 1969(d)(2)(C) requires motor vehicle manufacturers to provide descriptions of typical enabling criteria for OBD monitors. The staff is proposing an amendment that would also require manufacturers to provide monitor-specific OBD drive cycle information, when available, for all major OBD diagnostic strategies. The information will help technicians verify repair work by exercising the OBD system during a test drive. Based on input from technicians, the staff believes that both types of information, when available, are needed. Verification of repair work before a vehicle is released to the owner maximizes the emission benefits of the work and increases public confidence in the effectiveness of the OBD system. Depending on the equipment used by the technician and the types of streets that surround the service facility, one type of OBD monitor information may be more useful than the other. The U.S. EPA's service information rule requires both types of information to be provided when available.

2. Emergency Maintenance

In Mail-Out MSO #2003-03, the staff proposed to add language to title 13, CCR, section 1969(e)(2)(A) requiring manufacturers to notify the Executive officer if emergency maintenance becomes necessary. The requirement would allow the ARB to monitor the nature and expected timeframe of the maintenance and to field inquiries about it. Manufacturers were concerned with the proposal because some manufacturers have global servers located outside of the U.S., making immediate notification for emergency maintenance difficult. Manufacturers also feared that the ARB might unreasonably impose penalties on manufacturers because of the amendment. Questions as to what constitutes emergency maintenance and whether notification would benefit independent technicians were also raised. The industry submitted suggested regulatory language that addresses manufacturers' concerns but still provides the ARB with reasonable notification of significant website downtime. The staff concluded that the suggested language is acceptable and has incorporated it into its proposal. Under the revised language, manufacturers would notify the ARB within one business day if their websites are not available for more than 24 hours for reasons besides routine maintenance.

3. Definition of "Fair, Reasonable, and Nondiscriminatory Price"

The existing definition of "fair, reasonable, and nondiscriminatory price" in title 13, CCR, section 1969(c)(10)(I) includes a factor that considers additional criteria that the U.S. EPA may use for evaluating service information and tool costs. It was included to account for differences in the federal and California requirements for pricing that were present when the ARB proposed its original regulation in 2001. However, with the federal rulemaking now finalized with pricing factors identical to

those of California's, the staff proposes to delete the factor from the state's regulation.

D. Differences Between Federal and California Regulations

The ARB has worked with the U.S. EPA to ensure general consistency between state and federal service information requirements. Except for the inclusion of heavy-duty vehicles into California's requirements, the amendments proposed by the staff will further improve consistency between the two regulations. With the proposed amendment for heavy-duty vehicles, the ARB's regulation would be broader in scope than the federal regulation. However, no conflicts between state and federal requirements would be created.

VI. Air Quality, Environmental and Economic Impacts

A. Air Quality and Environmental Impacts

The proposed regulation will have a positive impact on air quality by providing independent heavy-duty service facilities with the tools and information necessary to effectively diagnose and repair emission-related malfunctions. However, instead of creating new emission reductions, the proposed regulation will help ensure that the emission benefits attributed to California's heavy-duty emissions standards and future heavy-duty OBD requirements will be fully realized. This benefit is based on the belief that the availability of convenient and reasonably priced service will cause owners to be more likely to service their vehicles when malfunctions occur. The widespread availability of service information will also allow for more accurate repair work. For reference, the ARB has estimated the emission reductions of NOx and particulate matter (PM) statewide for ARB's 2007 heavy-duty emission standards to be 48.0 and 2.7 tons per day, respectively, by the year 2010.¹¹

B. Environmental Justice

State law defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (Senate Bill 115, Solis; Stats 1999, Ch. 690; Government Code § 65040.12(c)). The Board has established a framework for incorporating environmental justice into the ARB's programs consistent with the directives of State law. The policies developed apply to all communities in California, but recognize that environmental justice issues have been raised more in the context of low income and minority communities, which sometimes experience higher exposures to some pollutants as a result of the cumulative impacts of air pollution from multiple mobile, commercial, industrial, areawide, and other sources.

¹¹ Source: ARB Staff Report: Initial Statement of Reasons, Public Hearing to Consider Amendments Adopting More Stringent Emission Standards for 2007 and Subsequent Model Year Heavy-Duty Diesel Engines, September 7, 2001.

Over the past twenty years, the ARB, local air districts, and federal air pollution control programs have made substantial progress towards improving the air quality in California. However, some communities continue to experience higher exposures than others as a result of the cumulative impacts of air pollution from multiple mobile and stationary sources and thus may suffer a disproportionate level of adverse health effects.

Since the same ambient air quality standards for heavy-duty vehicles apply to all regions of the State, all communities, including environmental justice communities, will benefit from the air quality benefits associated with the proposal. To the extent that heavy-duty truck operation is higher near certain communities, these communities will receive a greater benefit from a well maintained California fleet.

C. Economic Impacts

The Administrative Procedures Act requires that, in proposing to adopt or amend any administrative regulation, state agencies shall assess the potential for adverse economic impacts on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states, and fiscal impacts on state and local agencies. Below is staff's assessment of the economic impacts of this proposal.

1. Cost to State Agencies

When originally adopted, the ARB estimated that it would incur ongoing costs of up to \$200,000 annually to implement and enforce the service information regulation. Additionally, through 2009, the Department of Consumer Affairs will be required by Health and Safety Code section 43105.5(g), in conjunction with the ARB, to report to the State Legislature annually on the effectiveness of the regulation. The estimated cost to the Department of Consumer Affairs is not expected to exceed \$75,000 per year. The staff believes that no significant additional ARB resources will be required as a result of the amendments it has proposed. The proposed regulation is not expected to create additional costs to any other state agency, local district, or school district, including any federally funded state agency or program.

2. Costs to Engine and Motor Vehicle Manufacturers

When ARB's service information requirements were first adopted in 2001, light and medium-duty manufacturers estimated that start up costs would be between \$600,000 to \$5 million. Ongoing costs were estimated at \$150,000 to \$450,000. The ARB staff estimates that both start-up and ongoing costs will be substantially less for heavy-duty manufacturers.

ARB staff does not believe that start-up costs for heavy-duty manufacturers should exceed \$500,000. Because the regulation applies to manufacturers of all 1994 and later OBD-equipped vehicles, light- and medium-duty

vehicle manufacturers were required to revise nine model years of existing service information for web access. Heavy-duty engine and transmission manufacturers will not need to address internet-based service information access for any models prior to the 2007 model year. Further, heavy-duty engine and transmission manufacturers have a smaller number of product offerings, compared to most light and medium-duty vehicle manufacturers. Therefore, hardware costs for development computers and Internet servers are also expected to be less.

Regarding ongoing costs, fewer product offerings should also lower heavy-duty manufacturers' ongoing service information access costs compared to light- and medium-duty vehicles. The staff estimates that on-going costs should not exceed \$225,000 per year. These cost estimates are generally consistent with limited cost data provided by heavy-duty engine manufacturers. The estimates do not take into account any revenue from online subscriptions or document purchases. Manufacturers are permitted to set reasonable prices for information access.

3. Potential Impacts on Other Businesses

The regulations should have a positive impact on independent service repair facilities and aftermarket manufacturers through the wider availability of emission-related service information and tools. Covered persons should only incur additional expenses as a result of this regulation if they choose to purchase additional information and tools. However, in doing so, it is assumed that the purchases will be based on business decisions wherein the use of the information would be expected to yield a profit. The cost of purchasing such information under the proposal should be equal to or less than the current costs for the aftermarket heavy-duty service industry.

Franchised heavy-duty truck dealerships and manufacturer service networks may experience some loss of business as independent facilities conduct more repairs using the service information that would be provided by this rulemaking. However, this stimulation of competition in the service and repair industry was in fact the goal of SB 1146 and thus, such an effect was clearly recognized by the California Legislature when the bill was drafted.

4. Potential Impact on Business Competitiveness

The proposed regulation is expected to have no net effect on the ability of California businesses to compete with businesses in other states. Adoption of the regulations would allow California independent service facilities to compete more evenly with manufacturer dealerships and service networks within the state as they will be able to access the same types of repair information. Since, for the most part, the competition between the aftermarket and franchised dealerships/service networks is of an intrastate origin, the regulation should have no effect on the ability of California businesses to compete with businesses in other states.

5. Potential Impact on Employment

The regulatory proposal would not likely result in the loss of jobs. In fact, it may create some jobs in California. Engine and vehicle manufacturers may have a new need for skilled employees that are capable of designing, creating, and maintaining service information websites. Further, although some business may move from dealerships and independent service providers, the staff does not expect any overall reduction in engine or vehicle repair work, and thus, no reduction in California jobs. To the extent that more competition in the service industry is achieved, lower prices and better service could offer an incentive for more vehicle owners to seek repairs, possibly resulting in increased employment.

D. Regulatory Alternatives

1. Maintain Existing Service Information Regulation

Staff rejected this alternative because the Health and Safety Code and SB 1146 mandate that the availability of emission-related service information be required for all 1994 model year and later vehicles equipped with OBD systems. Adoption of requirements at this time for heavy-duty vehicles will ensure that adequate service information is available once OBD requirements for these vehicles take effect.

The other proposed amendments are minor yet necessary to clarify regulatory language that is unclear and to assist the ARB in harmonizing its provisions with those of the U.S. EPA. They also assist the ARB in enforcing its own regulation. Therefore, their inclusion is necessary to maximize the effectiveness of the regulation.

2. Adopt Federal Service Information Regulations

Adoption of the federal requirements would not fully address the responsibilities placed on the ARB by the California Legislature and SB 1146. SB 1146 specifically charged the ARB to develop its own service information regulation for California, with specific enforcement and reporting activities related to the service information regulation. These activities include issuance of notices to comply, participation in administrative hearings, and yearly reports to the legislature. The statute does not permit the ARB to consider relying on federal efforts to enforce U.S. EPA service information requirements.

Additionally, the U.S. EPA's service information regulation only applies to vehicles under 14,000 pounds GVWR and covers only the aftermarket service industry, and not parts manufacturers. Therefore, California-certified, heavy-duty vehicles and aftermarket parts manufacturers would not be covered if the state were to rely on the federal requirements.

3. Conclusion

Staff has determined that no feasible alternative considered would be more effective in carrying out the purpose of the proposed amendments. No alternative would be as effective or less burdensome to affected private persons than the proposed amendments to the regulation.

VII. Summary and Staff Recommendation

The staff's proposal is necessary and required under SB 1146 to ensure wide access to emission-related service information and diagnostic tools for future heavy-duty vehicles equipped with OBD systems. The amendments in this proposal will create a suitable environment for independent businesses in California to compete with engine and vehicle manufacturers and their dealerships or service networks for consumers' business when it comes to the repair of their vehicles. The widespread availability of emission-related service information to all service repair facilities would ensure that repair work is accurate, thorough, and complete, thereby providing all of California's citizens with the air quality benefits associated with properly maintained vehicles. Aftermarket parts manufacturers will also be able to use the required information to produce components that will work compatibly with the advanced emission control systems of today's cars and trucks.

The regulation duly provides for the disclosure of service information as envisioned by the State Legislature when SB 1146 was signed into law. Consequently, staff recommends that the Board adopt the proposed amendments to the service information regulations as outlined in title 13, CCR, section 1969.

VIII. References

SAE, "Surface Vehicle Recommended Practice, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms," J1939, May 1998.

SAE, "Surface Vehicle Recommended Practice, E/E Diagnostic Test Modes," J2403, Rev. September 1997.

The Maintenance Council, Recommended Practice RP1210A, "Windows™ Communication API," July 1999.

"Staff Report: Initial Statement of Reasons, Public Hearing to Consider Amendments Adopting More Stringent Emission Standards for 2007 and Subsequent Model Year Heavy-Duty Diesel Engines," Air Resources Board, September 7, 2001.

"Draft Preliminary Staff Report: Initial Statement of Reasons, Technical Status and Diagnostic System Requirements for 2007 and Subsequent Model Year Heavy-Duty Vehicles and Engines," Air Resources Board, July 25, 2003.

"Staff Report: Initial Statement of Reasons, Public Hearing to Consider Adoption of California Regulations for Motor Vehicle Service Information," Air Resources Board, October 26, 2001.

"California Motor Vehicle Service Information Rulemaking Status (Agenda Item No. 01-10-1): Immobilizers," Air Resources Board Memorandum, November 13, 2002.

Mail-Out MSO #2003-03, "Proposed Amendments to the California Motor Vehicle Service information Rulemaking," Air Resources Board, July 7, 2003.

Final Rulemaking, "Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines; Revisions to Regulations Requiring Availability of Information for Use of On-Board Diagnostic Systems and Emission-Related Repairs on 1994 and Later Model Year Light-Duty Vehicles and Light-Duty Trucks and 2005 and Later Model Year Heavy-Duty Vehicles and Weighing 14,000 Pound Gross Vehicle Weight or Less." Federal Register, June 27, 2003.

Senate Bill 1146: Motor Vehicles: Pollution Control Devices, authored by State Senator John Burton; approved by Governor Gray Davis September 30, 2000.

"1997 United States Economic Census," U.S. Census Bureau.

"2000 Heavy Duty Aftermarket Profile," Automotive Aftermarket Industry Association.

"2001 Aftermarket Factbook," Automotive Aftermarket Industry Association.

Title 13, California Code of Regulations, section 1968.1.

Title 13, California Code of Regulations, section 1968.2.

Title 13, California Code of Regulations, section 1969.

Title 17, California Code of Regulation, sections 60060.1 through 60060.34

August 6, 2003, letter from the Automotive Aftermarket Industry Association and the Automotive Parts Rebuilders Association.

August 13, 2003, letter from Allison Transmission.

August 14, 2003, Position Paper submitted from the Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers.

August 28, 2003, e-mail from Mr. Robert Braswell of the Technology and Maintenance Council. (Attached survey marked confidential.)

September 30, 2003, letter from the Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers.

ATTACHMENT**Proposed Amendments to:**

Title 13, California Code of Regulations, Chapter 1, Motor vehicle Pollution Control Devices, Article 2, Approval of Motor vehicle Pollution Control Devices (New Vehicles);
Section 1969, Motor vehicle Service Information – 1994 and Subsequent Model Passenger Cars, Light-duty and Medium-Duty Vehicles

Set forth in this attachment are proposed amendments to title 13 of the California Code of Regulations. Proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions.

Proposed Regulation Order

Amendments to Section 1969, title 13, California Code of Regulations, chapter 1, Motor vehicle Pollution Control Devices:

Article 2. Approval of Motor vehicle Pollution Control Devices (New Vehicles)

§1969 Motor vehicle Service Information – 1994 and Subsequent Model Passenger Cars, Light-Duty, and Medium-Duty Vehicles, and Heavy-Duty Vehicles

- (a) ~~Applicability. Unless otherwise noted, t~~This section shall apply to: (1) all California-certified 1994 and subsequent model-year passenger cars, light-duty trucks and medium-duty vehicles equipped with on-board diagnostic (OBD) systems pursuant to title 13, California Code of Regulations, sections 1968.1 or 1968.2; and (2) all California-certified engines and transmissions certified to the OBD requirements for heavy-duty vehicles adopted by the Air Resources Board. This section shall supersede the provisions of section 1968.1(k)(2.1) at all times that this section is effective and operative. These regulations shall also apply to any passenger cars, light-duty trucks, and medium-duty and heavy-duty vehicles certified to future on-board diagnostic requirements adopted by the Air Resources Board.
- (b) Severability of Provisions. If any provision of this section or its application is held invalid, the remainder of the section and the application of such provision to other persons or circumstances shall not be affected.
- (c) Definitions. The definitions in section 1900(b), Division 3, Chapter 9, Title 13 of the California Code of Regulations, apply with the following additions:
- (1) "Access codes, recognition codes and encryption" mean any type, strategy, or means of encoding software, information, devices, or equipment that would prevent the access to, use of, or proper function of any emission-related part.
 - (2) "Authorized service network" means a group of independent service and repair facilities that are recognized by motor vehicle manufacturers as being capable of performing repairs to factory specifications, including warranty repair work.
 - (2) 3 "Bi-directional control" means the capability of a diagnostic tool to send messages on the data bus (if applicable) that temporarily override a module's control over a sensor or actuator and give control to the diagnostic tool operator. Bi-directional controls do not create permanent changes to engine or component calibrations.
 - (3) 4 "Covered person" means: (1) any person or entity engaged in the business of service or repair of motor vehicles, engines, or transmissions who is licensed or registered with the Bureau of

Automotive Repair, pursuant to Section 9884.6 of the Business and Professions Code, to conduct that business in California; (2) any commercial business or government entity that repairs or services its own California motor vehicle fleet(s); (3) tool and equipment companies; or (4) any person or entity engaged in the manufacture or remanufacture of emission-related motor vehicle parts for California motor vehicles and motor vehicle engines.

- (4 5) "Data stream information" means information that originates within the vehicle by a module or intelligent sensor (including, but not limited to, a sensor that contains and is controlled by its own module) and is transmitted between a network of modules and intelligent sensors connected in parallel with either one or two communications wires. The information is broadcast over communication wires for use by other modules such as chassis or transmission modules to conduct normal vehicle operation or for use by diagnostic tools. Data stream information does not include engine calibration-related information.
- (5 6) "Days" means calendar days (unless otherwise specified in this section); in computing the time within which a right may be exercised or an act is to be performed, the day of the event from which the designated period runs shall not be included and the last day shall be included, unless:
- (A) for purposes of section 1969(e), the last day falls on a Sunday, or a California-recognized holiday observed by the subject motor vehicle manufacturer, in which case the last day shall be the following day;
 - (B) for all other purposes, the last day falls on a Saturday, Sunday, or a California-recognized holiday observed by the subject motor vehicle-manufacturer, in which case the last day shall be the following day.
- (6 7) "Emission-related motor vehicle information" means information regarding any of the following:
- (A) Any original equipment system, component, or part that controls emissions.
 - (B) Any original equipment system, component, or part associated with the powertrain system including, but not limited to, the fuel system and ignition system.
 - (C) Any original equipment system or component that is likely to impact emissions, including, but not limited to, the transmission system.
- (7 8) "Emission-related motor vehicle part" means any direct replacement automotive part or any automotive part certified by Executive Order that may affect emissions from a motor vehicle, including replacement parts, consolidated parts, rebuilt parts, remanufactured parts, add-on parts, modified parts and specialty parts.

- (8 9) "Enhanced data stream information" means data stream information that is specific for a motor vehicle manufacturer's brand of tools and equipment.
- (9 10) "Enhanced diagnostic tool" means a diagnostic tool that is specific to the motor vehicle-manufacturer's vehicles.
- (101) "Fair, reasonable, and nondiscriminatory price", for the purposes of section 1969, means a price that allows motor vehicle manufacturers to be compensated for the cost of providing required emission-related service information and diagnostic tools considering the following:
- (A) The net cost to the motor vehicle manufacturers' franchised dealerships or authorized service networks for similar information obtained from motor vehicle manufacturers, less any discounts, rebates or other incentive programs;
 - (B) The cost to the motor vehicle manufacturer for preparing and distributing the information, excluding any research and development costs incurred in designing and implementing, upgrading or altering the onboard computer and its software or any other vehicle part or component. Amortized capital costs for the preparation and distribution of the information may be included;
 - (C) The price charged by other motor vehicle manufacturers for similar information;
 - (D) The price charged by the motor vehicle manufacturer for similar information immediately prior to January 1, 2000 the applicability of this section;
 - (E) The ability of an average covered person to afford the information.
 - (F) The means by which the information is distributed;
 - (G) The extent to which the information is used, which includes the number of users, and frequency, duration, and volume of use; and
 - (H) Inflation; and
 - ~~(I) Any additional criteria or factors considered by the United States Environmental Protection Agency for the determination of service information costs under federal regulations.~~
- (142) "Initialization" or "reinitialization" means the process of resetting a vehicle security system by means of an ignition key or access code(s).
- (13) "Intermediary information repository" means any individual or entity, other than a motor vehicle manufacturer, which collects and makes available to covered persons service information and/or information related to the development of emission-related diagnostic tools.
- (14) "Motor vehicle manufacturer," for the purposes of section 1969, means:
- (A) Any manufacturer of 1994 model year and later passenger cars, light-duty trucks, and medium-duty vehicles equipped with OBD systems pursuant to title 13, California Code of Regulations, sections 1968.1 and 1968.2, or;

- (B) Any manufacturer that has certified a heavy-duty engine or transmission to the OBD requirements as adopted by the Air Resources Board.
- (125) "Nondiscriminatory" as used in the phrase "fair, reasonable, and nondiscriminatory price" means that motor vehicle manufacturers shall not set a price for emission-related service information or tools that provides franchised dealerships or authorized service networks with an unfair economic advantage over covered persons.
- (136) A "Reasonable business mean" is a method or mode of distribution or delivery of information that is commonly used by businesses or government to distribute or deliver and receive information at a fair, reasonable, and nondiscriminatory price. A reasonable business mean includes, but is not limited to, the Internet, first-class mail, courier services, intermediary information repositories, and fax services.
- (d) (1) Service Information: Except as expressly provided specified below, motor vehicle manufacturers shall make available for purchase to all covered persons all emission-related motor vehicle information that is provided to the motor vehicle manufacturer's franchised dealerships or authorized service networks for subject engine, transmission, or vehicle models. The information shall include, but is not limited to, diagnosis, service, and repair information and procedures, technical service bulletins, troubleshooting guides, wiring diagrams, and training materials.
- (2) On-Board Diagnostic System (OBD II) Information. Motor vehicle manufacturers shall make available for purchase to all covered persons, a general description of each OBD II system used in 1996 and subsequent model-year vehicles, which shall include the following:
- (A) A general description of the operation of each monitor, including a description of the parameter that is being monitored.
- (B) A listing of all typical OBD II diagnostic trouble codes associated with each monitor.
- (C) A description of the typical enabling conditions for each monitor to execute during vehicle operation, including, but not limited to, minimum and maximum intake air and engine coolant temperature, vehicle speed range, and time after engine startup. Motor vehicle manufacturers must also make available all existing monitor-specific OBD drive cycle information for all major OBD monitors as equipped including, but not limited to, catalyst, catalyst heater, oxygen sensor, oxygen sensor heater, evaporative system, exhaust gas recirculation, secondary air, and air conditioning system. As applicable, manufacturers of diesel vehicles must also list monitor-specific drive cycles for those vehicles that perform misfire, fuel system, and comprehensive

- monitoring under specific driving conditions (i.e., non-continuous monitoring).
- (D) A listing of each monitor sequence, execution frequency and typical duration.
 - (E) A listing of typical malfunction thresholds for each monitor.
 - (F) For OBD II parameters for specific vehicles that deviate from the typical parameters, the OBD II description shall indicate the deviation and provide a separate listing of the typical values for those vehicles.
 - (G) For passenger cars, light-duty trucks, and medium-duty vehicles, identification and scaling information necessary to interpret and understand data available to a generic scan tool through "mode 6," pursuant to Society of Automotive Engineers (SAE) J1979, which is incorporated by reference in title 13, CCR, sections 1968.1 and 1968.2. Heavy-duty engine, vehicle, and transmission manufacturers shall use the recommended practice(s) referenced in title 13, California Code of Regulations, section 1971, to provide information necessary to interpret "mode 6" data.
 - (H) The information required by this subsection shall not include specific algorithms, specific software code or specific calibration data beyond that required to be made available through the generic scan tool pursuant to the requirements of sections 1968.1, 1968.2, and all future adopted OBD regulations for passenger cars, light-duty trucks, and medium- and heavy-duty vehicles, except where such algorithms, codes, or data are made available to franchised dealerships or authorized service networks. To the extent possible, motor vehicle manufacturers shall organize and format the information so that it will not be necessary to divulge specific algorithms, codes, or calibration data considered to be a trade secret by the motor vehicle manufacturer.
- (3) On-Board Computer Initialization Procedures.
- (A) Consistent with the requirements of subsection (h) below, motor vehicle manufacturers shall provide make available for purchase to all covered persons computer or anti-theft system initialization information and/or related tools for vehicles so equipped necessary for:
 - (i) The proper installation of on-board computers on motor vehicles that employ integral vehicle security systems; or
 - (ii) The repair or replacement of any other emission-related part.
 - (B) Motor vehicle manufacturers must make this information available for purchase in a manner that will not require a covered person to purchase enhanced diagnostic tools to perform the initialization. Motor vehicle manufacturers may make such information

available through, for example, generic aftermarket tools, a pass-through device, or inexpensive manufacturer-specific cables.

(B C) A motor vehicle manufacturer may request Executive Officer approval to be excused from the requirements above for some or all model year vehicles through the 2007 model year. The Executive Officer shall approve the request upon him or her finding that the motor vehicle manufacturer has demonstrated that:

- (i) The availability of such information to covered persons would significantly increase the risk of vehicle theft, and
- (ii) It will make available to covered persons reasonable alternative means to install computers, or to otherwise repair or replace an emission-related part, at a fair, reasonable, and nondiscriminatory price and that such alternative means do not place covered persons, as a class, at a competitive disadvantage to franchised dealerships or authorized service networks in their ability to service and repair vehicles.

(a) Any alternative means shall be available to covered persons within 24 hours of the initial request and shall not require the purchase of enhanced diagnostic tools to perform an initialization. Alternatives may include lease of such tools, but only at a fair, reasonable and nondiscriminatory price.

(b) In lieu of leasing its enhanced diagnostic tools, a manufacturer may alternatively make available for purchase to independent equipment and tool companies all data stream information needed to make their diagnostic tools fully functional for initialization purposes. Any manufacturer choosing this option must release the information to equipment and tool companies within 60 days of Executive Officer approval.

(C D) The All approvals is are conditional and subject to audit under paragraph (j) below and possible rescission if the conditions set forth in paragraph (d)(3)(B C) fail to be satisfied.

- (4) ~~The information in this subsection shall be made available for purchase no later than 180 days after the effective date of these regulations or January 1, 2003, whichever is later, for vehicle models introduced into commerce on or before these dates. For all new vehicle models for which production commences after the effective date of these regulations, motor vehicle manufacturers shall make available for purchase the required information no later than 180 days after the start of engine or vehicle introduction into commerce or concurrently with its availability of the information to franchised dealerships or authorized service networks, whichever occurs first.~~

- (e) (1) Information required to be made available for purchase under subsection (d), excluding paragraph (d)(3), shall be directly accessible via the Internet. As an exception, motor vehicle manufacturers with annual California sales of less than 300 engines, transmissions, or vehicles (based on the average number of California-certified engines, transmissions, or vehicles sold by the motor vehicle manufacturer in the three previous consecutive model years) have the option not to provide required materials directly over the Internet. Such motor vehicle manufacturers may instead propose an alternative reasonable business means for providing the information required by this section to the Executive Officer for review and approval. The alternate method shall include an Internet website that adequately specifies that the required service information is readily available through other reasonable business means at fair, reasonable, and nondiscriminatory prices. If a manufacturer later exceeds the three-year vehicle sales average, it would be required to begin complying with all Internet availability requirements the next model year. In such cases, the requirements would apply only to those engine, transmission, and vehicle models certified in that and subsequent model years and would not apply to any models that were within carry-over test groups that were initially certified before the sales average was exceeded.
- (2) For purposes of making the information available for purchase via the Internet, motor vehicle manufacturers, or their designees, shall establish and maintain an Internet website(s) that:
- (A) Is accessible at all times, except during times required for routine and emergency maintenance. Routine maintenance shall be scheduled after normal business hours. If the motor vehicle manufacturer's service information website(s) is not available for more than 24 hours for other than routine maintenance, the motor vehicle manufacturer shall notify the Executive Officer by either phone or email within one business day.
 - (B) Houses all of the required information such that it is available for direct online access, except as provided in subsections (d)(3), (e)(2)(G) and (e)(2)(J). In addition to direct access, motor vehicle manufacturers may concurrently offer the information by means of electronic mail, fax transmission, or other reasonable business means.
 - (C) Is written in English with all text using readable font sizes.
 - (D) Has clearly labeled and descriptive headings or sections, has an online index connected to a search engine and/or hyperlinks that directly take the user to the information, and has a comprehensive search engine that permits users to obtain information by various query terms including, but not limited to, vehicle model, model year, bulletin number, diagnostic procedure, and trouble code.

- (E) Provides, at a minimum, e-mail access for communication with a designated contact person(s). The contact person(s) shall respond to any inquiries within 2 days of receipt, Monday through Saturday. The website shall also provide a business address for the purposes of receiving mail, including overnight or certified mail.
- (F) Lists the most recent updates to the website. Updates must occur concurrently with the availability of new or revised information to franchised dealerships or authorized service networks.
- (G) Provides all training materials offered by the motor vehicle manufacturer. For obtaining any training materials that are not in a format that can be readily downloaded directly from the Internet (e.g., instructional tapes, full-text information associated with bundled software, CD-ROMs, or other media), the website must include information on the type of materials that are available, and how such materials can be purchased.
- (H) Offers media files (if any) and other service information documents in formats that can be viewed with commonly available software programs (e.g., Adobe Acrobat, Microsoft Word, RealPlayer, etc.).
- (I) Provides secure Internet connections (i.e., certificate-based) for transfer of payment and personal information.
- (J) Provides ordering information and instructions for the purchase of motor vehicle manufacturer emission-related enhanced diagnostic tools and reprogramming information pursuant to subsection (f).
- (K) Complies with the SAE Recommended Practice J1930, "Electrical/Electronic Systems, Diagnostic Terms, Definitions, Abbreviations, and Acronyms," May 1998, incorporated by reference herein, for all emission-related motor vehicle information for passenger cars, light-duty trucks, and medium-duty vehicles beginning with the 2003 model year. For heavy-duty engines and vehicles to OBD regulations adopted by the ARB, emission-related nomenclature shall comply with SAE Recommended Practice J2403, "Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature," October 1998, incorporated by reference herein.
- (L) Complies with the following website performance criteria:
 - (i) Possesses sufficient server capacity to allow ready access by all users and has sufficient downloading capacity to assure that all users may obtain needed information without undue delay.
 - (ii) Broken weblinks shall be corrected or deleted weekly.
 - (iii) Website navigation does not require a user to return to the motor vehicle manufacturer's home page or a search engine in order to access a different portion of the site. The use of

“one-up” links (i.e., links that connect to related webpages that preceded the one being viewed) is recommended at the bottom of subordinate webpages in order to allow a user to stay within the desired subject matter.

- (iv) Any manufacturer-specific acronym or abbreviation shall be hyperlinked to a glossary webpage or pop-up window that explains its meaning.
- (M) Indicates the minimum hardware and software specifications required for satisfactory access to the website(s).
- (3) All information must be maintained by the motor vehicle manufacturer for a minimum of fifteen years. After such time, the information may be retained in an off-line electronic format (e.g., CD-ROM) and made available for purchase in that format at fair, reasonable, and nondiscriminatory prices upon request. Motor vehicle manufacturers shall index their available archived information with a title that adequately describes the contents of the document to which it refers. Motor vehicle manufacturers may allow for the ordering of information directly from the website, or from a website hyperlinked to the manufacturer website. In the alternative, manufacturers shall list a phone number and address where covered persons can call or write to obtain requested information through reasonable business means.
- (4) Motor vehicle manufacturers must implement fair, reasonable, and nondiscriminatory pricing structures that provide for a range of time periods for online access (e.g., in cases where information can be viewed online) and/or the amount of information purchased (e.g., in cases where information becomes viewable after downloading). These pricing structures shall be submitted to the Executive Officer for review concurrently with being posted on the motor vehicle manufacturer’s service information website(s).
- (5) Motor vehicle manufacturers must provide the Executive Officer with free, unrestricted access to their Internet websites. Access shall include the ability to view and download posted service information. The information necessary to access the websites (e.g., user name, password, contact person(s)) must be submitted to the Executive Officer once the websites are operational.
- (6) Reporting Requirements. Motor vehicle manufacturers shall provide the Executive Officer with reports that adequately demonstrate that the performance of their individual Internet websites meets the requirements of subsection (e)(2). Motor vehicle manufacturers shall submit such reports annually by December 31st. The Executive Officer may also require motor vehicle manufacturers to submit additional reports upon request, including any information required by the United States Environmental Protection Agency under the Federal Service Information Rule regulation. These reports shall be submitted in a format prescribed by the Executive Officer.

- (f) Diagnostic and Reprogramming Tools and Information.
- (1) Diagnostic and Reprogramming Tools.
- (A) Except as provided in (B) below, all Mmotor vehicle manufacturers shall make available for purchase through reasonable business means, including ordering over the Internet, to all covered persons, all emissions-related enhanced diagnostic tools, and reprogramming tools available to franchised dealers or authorized service networks, including software and data files used in such equipment. The motor vehicle manufacturer shall ship purchased tools to a requesting covered person as expeditiously as possible after a request has been made.
- (B) As a condition of purchase, heavy-duty engine and transmission manufacturers may require covered persons to participate in training courses related to the proper use of their enhanced diagnostic tools before making them available for purchase. The training must be made available at a fair, reasonable, and nondiscriminatory prices.
- (2) Data Stream and Bi-Directional Control Information.
- (A) Except as provided in (B) below, all Mmotor vehicle manufacturers shall make available for purchase through reasonable business means, to all equipment and tool companies, all information necessary to read and format all emission-related data stream information, including enhanced data stream information, that is used in diagnostic tools available to franchised dealerships or authorized service networks, and all information that is needed to activate all emission-related bi-directional controls that can be activated by franchised dealership or authorized service network tools. The motor vehicle manufacturer shall make such information available through the Internet or other reasonable business means to the requesting equipment and tool company within 14 days after the request to purchase has been made, unless the motor vehicle manufacturer petitions the Executive Officer for approval to refuse to disclose such information to the requesting company. After receipt of a petition and consultation with the affected parties, the Executive Officer shall either grant or refuse the petition based on the evidence submitted during the consultation process:
- (A i) If the evidence demonstrates that the motor vehicle manufacturer has a reasonably-based belief that the requesting equipment and tool company could not produce safe and functionally accurate tools, the petition will be granted.
- (B ii) If the evidence does not demonstrate that the motor vehicle manufacturer has a reasonably-based belief that

the requesting equipment and tool company could not produce safe and functionally accurate tools, the petition will be denied and the motor vehicle manufacturer shall make the requested information available to the requesting equipment and tool company within 2 days of the denial.

- (B) As a condition of purchase of the manufacturer's enhanced diagnostic data stream and bi-directional control information, heavy-duty engine and transmission manufacturers may require that an equipment and tool company purchasing such information provide mandatory training courses to ultimate purchasers of the equipment and tools made available for sale using the purchased data stream and bi-directional control information. If required, such training shall include instruction on the proper operation of the equipment and tool as it applies the engine or transmission in question.
- (3) Reprogramming Information.
- (A) Beginning with the 2004 model year, motor vehicle manufacturers' reprogramming methods shall be compatible with SAE J2534 Paper, "Recommended Practice for Pass-Thru Vehicle Programming, February 2002 December 2003, which is incorporated by reference herein, for all vehicle models that can be reprogrammed by franchised dealerships or authorized service networks. Heavy-duty engine and transmission manufacturers may alternatively standardize its reprogramming methods to the Technology and Maintenance Council's Recommended Practice RP1210a, "Windows™ Communication API," July 1999, incorporated by reference herein.
- (B) Motor vehicle manufacturers shall make available for purchase through reasonable business means to covered persons for vehicle models meeting the requirements of subsection (f)(3)(A) all vehicle reprogramming information and materials necessary to install motor vehicle manufacturers' software and calibration data to the extent that it is provided to franchised dealerships or authorized service networks. The motor vehicle manufacturer shall, within 2 days of receipt of a covered person's request, provide purchased reprogramming information via an Internet download or, if available in a different electronic format, via postal mail or package delivery service.
- (4) ~~The information and tools required by this subsection shall be made available for purchase no later than 180 days after the effective date of these regulations or January 1, 2003, whichever is later, for vehicle models introduced into commerce on or before these dates. For all new vehicle models for which production commences after the above dates, motor vehicle manufacturers shall make available for purchase the required information no later than 180 days after the start of engine~~

or vehicle introduction into commerce or concurrently with its availability to franchised dealerships or authorized service networks, whichever occurs first.

- (g) Costs: All information and diagnostic and reprogramming tools required to be provided to covered persons by these regulations shall be made available for purchase at a fair, reasonable, and nondiscriminatory prices.
- (h) Motor vehicle manufacturers shall not utilize any access code, recognition code or encryption for the purpose of preventing a vehicle owner from using an emission-related motor vehicle part (with the exception of the powertrain control module, engine control modules and transmission control modules), that has not been manufactured by that motor vehicle manufacturer or any of its original equipment suppliers.
- (i) Trade Secrets: Motor vehicle manufacturers may withhold trade secret information (as defined in the Uniform Trade Secret Act contained in Title 5 of the California Civil Code) which otherwise must be made available for purchase, subject to the following:
 - (1) At the time of initial posting of all information required to be provided under sections (d) through (f) above, the motor vehicle manufacturer shall identify, by brief description, any information that it believes to be a trade secret and not subject to disclosure.
 - (2) A covered person, believing that a motor vehicle manufacturer has not fully provided all information that is required to be provided under subsections (d) through (f) above shall submit a request in writing by certified mail to the motor vehicle manufacturer for release of the information.
 - (3) Upon receipt of the request for information, a motor vehicle manufacturer shall do the following:
 - (A) If it had not previously made the information available for purchase because of an oversight, it shall make the information available within 2 days from receipt of the request directly to the requesting covered person at a fair, reasonable, and nondiscriminatory price and by reasonable business means. Additionally, the motor vehicle manufacturer shall, within 7 days, make such information available for purchase to other covered persons consistent with the requirements of these regulations.
 - (B) If it has not made the requested information available for purchase because it believes the information to be a trade secret, it shall within 14 days, notify the requesting covered person that it considers the information to be a trade secret, provide justification in support of its position, and make reasonable efforts to see if the matter can be resolved informally.

- (C) If during this 14 day period set forth in paragraph (B), the motor vehicle manufacturer determines that the information is, in fact, not a trade secret, it shall immediately notify the requesting covered person of its determination and make the information available within the timeframes and means set forth in paragraph (A)
 - (D) If the parties can informally resolve the matter, the motor vehicle manufacturer shall within 2 days provide the requesting covered person with all of the information that is subject to disclosure consistent with that agreement. The motor vehicle manufacturer shall also, within 7 days, make such information available for purchase to other covered persons consistent with the requirements of these regulations.
 - (E) If the matter cannot be informally resolved, the motor vehicle manufacturer shall, within 21 days from the date that it initially received the request for information, petition the California superior court for declaratory relief to make a finding that the information is exempt from disclosure because it is a trade secret. The petition shall be filed in accordance with the California Code of Civil Procedure section 395 et seq. The petition shall be accompanied with a declaration stating facts that show that the motor vehicle manufacturer has made a reasonable and good faith attempt to informally resolve the matter.
- (j) Executive Officer Review of Compliance.
- (1) The Executive Officer shall monitor compliance with the requirements of Health and Safety Code section 43105.5 and this regulation.
 - (2) The Executive Officer, through the Chief of the Mobile Source Operations Division (Division Chief), shall periodically audit a motor vehicle manufacturer's Internet website(s) and other distribution sources to determine whether the information requirements of Health and Safety Code section 43105.5 and this regulation are being fulfilled. Motor vehicle manufacturers must provide the Executive Officer with free unrestricted access to the sites and other sources for the purposes of an audit.
 - (3) The Division Chief shall also commence an audit upon receipt of a request from a covered person that provides reasonable cause to believe that a motor vehicle manufacturer is not in compliance.
 - (A) Such a request shall be in the form of a written declaration setting forth specific details of the alleged noncompliance of the motor vehicle manufacturer. The declaration shall also set forth facts that demonstrate that the requesting covered has undertaken efforts to resolve the matter informally with the named motor vehicle manufacturer.

- (B) The covered person shall concurrently serve a copy of the audit request on the motor vehicle manufacturer against whom the request has been filed.
 - (C) The Division Chief shall determine if the request, on its face, sets forth facts establishing reasonable cause to believe that that motor vehicle manufacturer is in noncompliance with Health and Safety Code section 43105.5 or these regulations and that the covered person has undertaken reasonable efforts to informally resolve the alleged noncompliance with the motor vehicle manufacturer directly. If the Division Chief determines that the request satisfies these conditions, he or she shall conduct an audit of the designated motor vehicle manufacturer's site. Otherwise, the Division Chief shall dismiss the request and notify the requesting covered person and the affected motor vehicle manufacturer of his or her determination.
- (4) In conducting any audit, the Division Chief may require the motor vehicle manufacturer to provide the ARB with all information and materials related to compliance with the requirements of Health and Safety Code section 43105.5 and this regulation, including but not limited to:
 - (A) Copies of all books, records, correspondence or documents in its possession or under its control that the motor vehicle manufacturer is required to provide to persons engaged in the service and repair industries and to equipment and tool companies under paragraphs (c) through (f) of this regulation, and
 - (B) Any and all reports or records developed or compiled either for or by the motor vehicle manufacturer to monitor performance of its Internet site(s).
 - (5) In conducting the audit, the Division Chief may order or subpoena the motor vehicle manufacturer, the party filing the request for inspection, or any other person with possible knowledge of the issue of noncompliance to appear in person and testify under oath. The Division Chief may also request or subpoena such persons to provide any additional information that the Division Chief deems necessary to determine any issue of noncompliance.
 - (6) Except for good cause, the audit shall be completed within 60 days from the date that the Division Chief notifies the motor vehicle manufacturer about the audit. At the conclusion of the audit, the Division Chief shall issue a written determination, with supporting findings, regarding compliance by the motor vehicle manufacturer.
 - (7) If the Division Chief finds sufficient credible evidence that the motor vehicle manufacturer is not in compliance with any requirements of Health and Safety Code section 43105.5 or this regulation, the determination shall be in the form of a notice to comply against the motor vehicle manufacturer.

- (8) The Division Chief's determination not to issue a notice to comply against a motor vehicle is subject to limited review by the Executive Officer.
- (A) A covered person may only request that the Executive Officer review a determination that it specifically requested pursuant to paragraph (3) above.
 - (B) The covered person shall file the request for Executive Officer review within 10 days from the date of issuance of the Division Chief's determination.
 - (i) The request shall be filed to the attention of the Executive Officer c/o Clerk of the Board, Air Resources Board, P.O. Box 2815, Sacramento, CA 95812-2815. A copy of the request shall be concurrently served on the motor vehicle manufacturer that was the subject of the audit and determination.
 - (ii) The request shall set forth specific facts and reasons why the determination should be reviewed and supporting legal authority for why a notice to comply should have been issued.
 - (C) The motor vehicle manufacturer may file an opposition to the request for review within 10 days from the date of service of the request for review.
 - (D) The Executive Officer shall issue a determination within 30 days from the last day that the motor vehicle manufacturer had to file an opposition. The Executive Officer may affirm the decision of the Division Chief; remand the matter back to the Division Chief for further consideration or evidence; or issue a notice to comply against the motor vehicle manufacturer.
- (9) Within 30 days from the date of issuance of a notice to comply, the motor vehicle manufacturer shall either:
- (A) Submit to the Executive Officer a compliance plan that adequately demonstrates that the motor vehicle manufacturer will come into compliance with this section within 45 days from the date of submission of the plan, or such longer period that the Executive Officer deems appropriate to allow the motor vehicle manufacturer to properly remedy the noncompliance; or
 - (B) Request an administrative hearing to consider the basis or scope of the notice to comply.
- (10) If the motor vehicle manufacturer elects to submit a compliance plan, the Executive Officer shall review the plan and issue a written determination, within 30 days, either accepting or rejecting the plan. The Executive Officer shall reject the compliance plan if the Executive Officer finds that it will not bring the motor vehicle manufacturer into compliance within 45 days from the date that the plan would have been approved, or such longer period that the Executive Officer deemed

appropriate to allow the motor vehicle manufacturer to properly remedy the noncompliance. The Executive Officer shall notify the motor vehicle manufacturer in writing of his or her determination, and that the Executive Officer will be seeking administrative review pursuant to subsection (k) below.

- (11) After approving a proposed compliance plan, if the Executive Officer determines that the motor vehicle manufacturer has failed to comply with the terms of the plan, the Executive Officer shall notify the motor vehicle manufacturer of his or her determination and that he or she will be seeking administrative review pursuant to subsection (k) below.
- (k) Administrative Hearing Review.
- (1) A motor vehicle manufacturer may request that a hearing officer review the basis and scope of the notice to comply. Failure by the motor vehicle manufacturer to request such a review and failing, in the alternative, to submit a compliance plan as required by paragraph (j)(8)(A) shall result in the Executive Officer's determination becoming final and may subject the motor vehicle manufacturer to penalties pursuant to Health and Safety Code section 43105.5(f) and paragraph (l).
 - (2) The Executive Officer shall forward the following matters to a hearing officer for appropriate administrative review, including, if warranted, consideration of penalties:
 - (A) A compliance plan that it has rejected pursuant to paragraph (j)(9).
 - (B) A notice to comply that has been issued against a motor vehicle manufacturer who has failed to either request administrative review of the Executive Officer determination, or, in the alternative, to submit a compliance plan.
 - (C) An Executive Officer determination that a motor vehicle manufacturer has failed to satisfy the terms of a compliance plan it has submitted in response to a notice to comply.
 - (3) Administrative hearings under this regulation shall be conducted pursuant to the procedures set forth in title 17, California Code of Regulations, section 60060 et seq.
- (l) Penalties.
- (1) If after an administrative hearing, the hearing officer finds that the motor vehicle manufacturer has failed to comply with any of the requirements of this section, and the motor vehicle manufacturer fails to correct the violation within 30 days from the date of his finding, the hearing officer may impose a civil penalty upon the motor vehicle manufacturer in an amount not to exceed \$25,000 per day (including Saturdays, Sundays, and observed holidays) per violation until the violation is corrected. The hearing officer may immediately impose a

- civil penalty in cases where a motor vehicle manufacturer has failed to act in accordance with a compliance plan it has previously submitted.
- (2) For purposes of this section, a finding by a hearing officer that a motor vehicle manufacturer has failed to comply with the requirements of Health and Safety Code section 43105.5 and title 13, CCR, section 1969 et seq., including the failure to submit a timely compliance plan, shall be considered a single violation.

NOTE: Authority cited: sections 39600, 39601, 43000.5, 43018, and 43105.5, and 43700, Health and Safety Code. Reference: section 39027.3, 43104 and 43105.5, Health and Safety Code

TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER PROPOSED AMENDMENTS TO THE AREA DESIGNATION CRITERIA AND AREA DESIGNATIONS FOR STATE AMBIENT AIR QUALITY STANDARDS

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider adoption of amendments to the regulations establishing designation criteria, and to the regulations designating areas of California as attainment, nonattainment, nonattainment-transitional or unclassified for pollutants with State ambient air quality standards set forth in section 70200 of title 17, California Code of Regulations.

DATE: January 22, 2004

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Air Resources Board
1001 "I" Street
Auditorium, Second Floor
Sacramento, CA 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., January 22, 2004 and may continue at 8:30 a.m., January 23, 2004. This item may not be considered until January 23, 2004. Please consult the agenda for the meeting, which will be available at least 10 days before January 22, 2004, to determine the order in which the scheduled items will be considered.

This facility is accessible to persons with disabilities. If you have special accommodation or language needs, please contact ARB's Clerk of the Board at (916) 322-5594, or sdorias@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected: Proposed amendments to sections 60200, 60201, 60202, and 60206; adoption of new section 60210; amendments to sections 70302, 70303, 70303.1, 70303.5, and 70304, and appendices 1, 2, and 3 to sections 70300 through 70306, title 17, California Code of Regulations (CCR).

Background: Pursuant to section 39606 of the Health and Safety Code (H&SC), the Board is charged with the responsibility to adopt standards of ambient air quality for each air basin in consideration of the public health, safety and welfare. The Board has

adopted State ambient air quality standards (State Standards) for ten pollutants, set forth in section 70200, title 17, CCR. The California Clean Air Act in H&SC section 39607(e) also requires the Board to establish and periodically review designation criteria. These criteria provide the basis for designating areas of California as attainment, nonattainment, nonattainment-transitional, or unclassified with respect to the State standards.

Under H&SC section 39607(e), the Board first established designation criteria at a public hearing in June 1989 (sections 70300 through 70306, and appendices 1 through 4, thereof, title 17, CCR). The Board has amended these designation criteria several times since then, most recently in 1998. State law further requires the ARB to establish and annually review the area designations for State standards. During the annual review, ARB determines whether changes to the existing area designations are warranted, based on an evaluation of recent air quality data.

In past years, the ARB has made area designations for nine pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM10), sulfates, lead, hydrogen sulfide, and visibility reducing particles. This year marks the first time the ARB will be making area designations for the new State PM2.5 standard that the Board adopted in June 2002. In addition, this year's designations also incorporate changes made to the State annual PM10 standard, as well as the State sulfates standard.

The State PM2.5 standard is 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), measured as an annual arithmetic mean. When the Board adopted the PM2.5 standard, they also made modifications to the existing State annual PM10 standard. The Board lowered the existing State annual PM10 standard from 30 $\mu\text{g}/\text{m}^3$ to 20 $\mu\text{g}/\text{m}^3$. At that time the Board also revised the averaging method (from an annual geometric mean to an annual arithmetic mean) as well as the measurement method for determination of attainment of the 24-hour sulfates standard. The Board changed the measurement method for the State sulfates standard. The old sulfates method was based on total suspended particulate matter (TSP) measurements, while the new method is based on PM10 measurements. All of these changes became effective on July 5, 2003.

Area Designation Criteria: The designation criteria specify the data requirements, the size of the designated areas, and other requirements for determining the appropriate area designation category. Based on the designation criteria and specific requirements applicable to the nonattainment-transitional designation category for ozone specified in H&SC section 40925.5(a), the Board designates areas as attainment, nonattainment, nonattainment-transitional or unclassified for each of the ten pollutants with State standards set forth in section 70200, title 17, CCR.

Based upon review of the designation criteria, the ARB staff is proposing several changes to these criteria. The primary change concerns the new PM2.5 standard. When ARB adopted the State PM2.5 standard, it was included in section 70200, title 17, CCR. Because the designation criteria apply to all pollutants with standards specified in

section 70200, title 17, CCR, PM2.5 is already included among the pollutants for which the ARB makes area designations. However, the designation criteria do not specify any default geographic area for the PM2.5 designations. There are two options under the designation criteria: air basin or county. The ARB staff is proposing to add PM2.5 to the list of pollutants that are designated by air basin. Similar to ozone and PM10, PM2.5 is a regional pollutant that can impact a large area. However, similar to other pollutants, the designation criteria allow the Board to designate a smaller area, if justified. In several areas of the State, ARB staff is proposing PM2.5 designations for areas smaller than an air basin.

The ARB staff is also proposing several other minor changes to the designation criteria. These amendments would not change the way in which the Board makes the area designations for State standards. These changes include: (1) clarifying how ozone nonattainment-transitional designations are applied to air districts that span more than one air basin, (2) adding additional language to clarify the data representativeness and data completeness requirements, and (3) minor language changes to provide clarification and consistency among the various provisions of the designation criteria. These changes would amend sections 70302, 70303, 70303.1, 70303.5, and 70304, and appendices 1, 2, and 3 to sections 70300 through 70306, title 17, CCR.

Area Designations: Based on the designation criteria, H&SC section 39608 requires the Board to designate areas of California for State standards and to update these designations annually. The area designations comprise sections 60200 through 60209, title 17, CCR. This year's review of the area designations is based on air quality data from 2000 through 2002. The amendments include new area designations for PM2.5, which are proposed to be included in a new section 60210, as well as changes to the existing area designations for several areas for ozone, carbon monoxide, and sulfates. Note that although the Board modified the State annual PM10 standard, a review of the air quality data indicated no change to the existing State PM10 area designations was necessary. In addition to the area designation changes, the staff proposes amending section 60200, title 17, CCR, which contains descriptions of non-county areas that are designated. The proposed changes would update the area boundary description for the city of Calexico and add new area boundary descriptions for Central San Bernardino County (consistent with the San Bernardino County portion of the federal Southeast Desert Modified AQMA for ozone) and the Portola Valley area of Plumas County.

PM2.5:

Based on a review of 2000 through 2002 area quality data, staff proposes the following designations for the State PM2.5 standard. Since this is the first year for these area designations, they would be included in a new section 60210:

- ◆ *Attainment:* Lake County Air Basin
- ◆ *Nonattainment:* San Diego Air Basin, San Francisco Bay Area Air Basin, San Joaquin Valley Air Basin, South Coast Air Basin, a portion of Sacramento Valley Air Basin (Butte and Sacramento counties and the portion of Placer County within

the air basin), a portion of Imperial County (the city of Calexico), Ventura County, Central San Bernardino County (consistent with the San Bernardino County portion of the federal Southeast Desert Modified AQMA for ozone), and the Portola Valley area of Plumas County.

- ◆ *Unclassified*: remaining areas of the State based on a review of 2000 through 2002 air quality, the staff proposes the following changes to the existing area designations for ozone, carbon monoxide and sulfates:

Ozone:

- ◆ Designate San Luis Obispo County and the portion of Sonoma County in the North Coast Air Basin as attainment. These areas are currently designated as nonattainment-transitional.
- ◆ Designate Butte County and the North Central Coast Air Basin as nonattainment. These areas are currently designated as nonattainment-transitional. These designations occur by operation of law, based on data for record for the applicable time period.
- ◆ Designate Colusa County as nonattainment-transitional. The County is currently designated as nonattainment. This change occurs by operation of law, based on data for record for the applicable time period.

Carbon Monoxide:

- ◆ Designate the Los Angeles County portion of the South Coast Air Basin as nonattainment-transitional. This area is currently designated as nonattainment.

Sulfates:

- ◆ Designate the San Bernardino County portion of the Searles Valley Planning Area as attainment. This area is currently designated as nonattainment.

COMPARABLE FEDERAL REGULATIONS

The proposed changes are amendments to existing State regulations. There are no comparable federal or local regulations.

AVAILABILITY OF DOCUMENTS AND CONTACT PERSONS

The ARB staff has prepared a Staff Report for the proposed regulatory action. This "Initial Statement of Reasons" (ISOR), includes a summary of the potential environmental and economic impacts of the proposal, environmental justice considerations, and supporting technical documentation. The Staff Report is entitled: "Initial Statement of Reasons for Proposed Rulemaking: Proposed Amendments to the Area Designation Criteria and Area Designations for State Ambient Air Quality Standards and Maps of Area Designations for State and National Ambient Air Quality Standards."

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strike-out format to allow for comparison with the existing regulations, may be accessed on the ARB's web site listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 "I" Street, Visitors and Environmental Services Center, First Floor, Sacramento, CA 95814, (916) 322-2990, at least 45 days prior to our scheduled January 22, 2004, hearing.

Upon its completion, the Final Statement of Reasons (FSOR) will be available, and copies may be requested from the agency contact persons in this notice, or may be accessed on the web site listed below.

Inquires concerning the substance of the proposed regulations may be directed to the designated agency contact persons: Ms. Marcella Nystrom, Staff Air Pollution Specialist at (916) 323-8543 or via email at mnystrom@arb.ca.gov, or Ms. Gayle Sweigert, Manager, Air Quality Analysis Section, Planning and Technical Support Division, (916) 322-6923 or via email at gsweiger@arb.ca.gov.

Further, the agency representative and designated back-up contact persons to whom non-substantive inquiries concerning the proposed administrative action may be directed are Ms. Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Ms. Alexa Malik, Regulations Coordinator, (916) 322-4011. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. The material is available for inspection upon request to the contact persons.

If you are a person with disability and desire to obtain this document in an alternative format, please contact the ARB's Clerk of the Board at (916) 322-5594, or sdorias@arb.ca.gov as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

This notice, the ISOR, and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at www.arb.ca.gov/reqact/area04/area04.htm.

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed amendments are presented below.

The proposed amendments to the designation criteria and area designation regulations do not contain any requirements for action. Subsequent requirements for action may result after additional steps, such as plan preparation and approval, are taken. The designation criteria provide the basis for determining the appropriate area designations

for State standards, and the area designations are simply labels that describe the healthfulness of the air quality in each area. Because these regulations by themselves contain no requirements for action, they have no direct economic impact, and the following general determinations are appropriate.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state under Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary savings to state or local agencies.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer also has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the Staff Report (ISOR).

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will not affect small businesses because the proposed regulatory action does not contain any requirements for action.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by email before the hearing. To be considered by the Board,

written submissions not physically submitted at the hearing must be received no later than 12:00 noon, January 21, 2004, and addressed to the following:
Postal Mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to area04@listserv.arb.ca.gov and received at the ARB no later than 12:00 noon, January 21, 2004.

Facsimile submissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB no later than 12:00 noon, January 21, 2004.

The Board requests, but does not require, that 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

STATUTORY AUTHORITY AND REFERENCES

This regulatory action is proposed under authority granted in Health and Safety Code sections 39600, 39601, 39606, 39607, 39608, and 40925.5. The amendments to the regulations are proposed to implement, interpret, and make specific sections 39606, 39607, 39608 and 40925.5 of the H&SC.

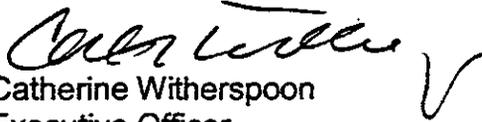
HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Title 2, Division 3, Part 1, Chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with nonsubstantive or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action; in such event the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 "I" Street, Visitors and Environmental Services Center, First Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD


Catherine Witherspoon
Executive Officer

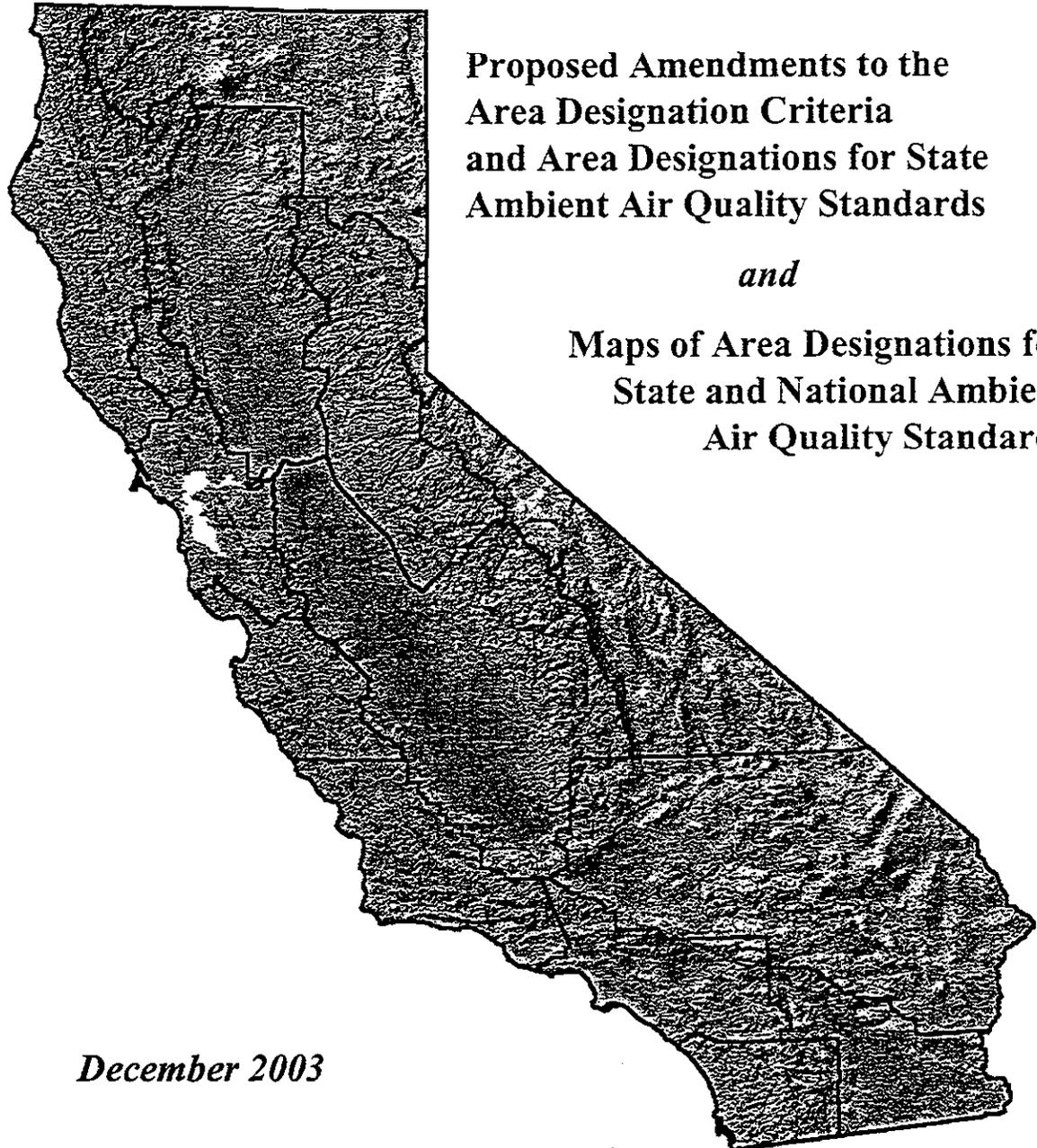
Date: November 25, 2003

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web site at www.arb.ca.gov.

California Environmental Protection Agency



Air Resources Board



**Proposed Amendments to the
Area Designation Criteria
and Area Designations for State
Ambient Air Quality Standards**

and

**Maps of Area Designations for
State and National Ambient
Air Quality Standards**

December 2003

**Proposed Amendments to the Area Designation Criteria
and Area Designations for State Ambient Air Quality Standards**

and

**Maps of Area Designations for
State and National Ambient Air Quality Standards**

STAFF REPORT:
Initial Statement of Reasons for Proposed Rulemaking

Release Date: December 5, 2003

California Environmental Protection Agency
Air Resources Board
Planning and Technical Support Division
P. O. Box 2815
Sacramento, California 95812

This document has been reviewed and approved by the staff of the California Environmental Protection Agency, Air Resources Board. Approval does not signify that the contents necessarily reflect the views and policies of the California Air Resources Board.

If you have special language needs, please contact Marcella Nystrom, document coordinator, at (916) 323-8543 or mnystrom@arb.ca.gov. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

The Air Resources Board (ARB or Board) has established health-based State ambient air quality standards (State standards) to identify outdoor pollutant levels that are considered safe for the public—including those individuals most sensitive to the effects of air pollution, such as children and the elderly. After State standards are established, State law requires ARB to designate each area of the State as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent air quality data, indicate the healthfulness of the air throughout the State. As required by State law, ARB has also established designation criteria to ensure that the area designations for State standards are made in a consistent manner.

The Board originally adopted the designation criteria and area designation regulations in 1989. State law requires ARB to annually review the area designations and periodically review the designation criteria to ensure their continued relevance. In the past, the Board has made area designations for nine pollutants with State standards. In June 2002, the Board adopted a new PM_{2.5} standard resulting in the need to make area designations for PM_{2.5} and to amend the designation criteria to specify a geographic area for the PM_{2.5} designations.

Proposed Changes to the Designation Criteria Regulations

As a result of our review, the ARB staff proposes amending several provisions of the designation criteria, as summarized below. One amendment would add PM_{2.5} to the list of pollutants designated by air basin. The remaining amendments would not change the way in which the Board designates areas, but would simply clarify existing aspects of the designation criteria and assure consistency among the various provisions of the designation criteria. The full text of the proposed amendments is included as Attachment A to this staff report.

- *Add PM_{2.5} to the list of pollutants designated by air basin.*
- *Add language to clarify the circumstances for designating a portion of a district within an air basin as nonattainment-transitional for ozone.*
- *Add language to clarify the procedure in Appendix 1: Criteria for Determining Data Representativeness.*
- *Add language to clarify the procedure in Appendix 3: Criteria for Determining Data Completeness.*
- *Clarify within the designation criteria that the word “standard” refers to a “State” standard.*
- *Clarify within the designation criteria that the “appendices” referenced are appendices to the designation criteria.*

Proposed Changes to the Area Designation Regulations

Based on the 2000 through 2002 air quality data, ARB staff is proposing changes to the current area designations for ozone, carbon monoxide, and sulfates for several areas of California. The most notable change is that there are now two new areas of the State that attain the health-based State ozone standard. In addition, the ARB staff is proposing to make area designations for the State PM_{2.5} standard. These proposed changes are summarized below. Furthermore, because some of the proposed PM_{2.5} designation areas are not defined as an air basin or county, the ARB staff is proposing to update and add several boundary definitions to the non-county area descriptions contained in the area designation regulations. Specifically, these include updating the current city of Calexico boundary description and adding new boundary descriptions for central San Bernardino County (using the federal Southeast Desert Modified AQMA for ozone description) and the Portola Valley area of Plumas County. The full text of the proposed regulatory changes can be found in Attachment B to this staff report.

PROPOSED AREA DESIGNATIONS FOR STATE STANDARDS

PROPOSED AREA DESIGNATIONS FOR POLLUTANTS OTHER THAN PM_{2.5}			
Pollutant	Area / Air Basin	Current Designation*	Proposed Designation*
Ozone	San Luis Obispo County (South Central Coast AB)	NA-T	A
	Sonoma County (North Coast AB)	NA-T	A
	Butte County (Sacramento Valley AB)	NA-T	N
	North Central Coast Air Basin	NA-T	N
	Colusa County APCD (Sacramento Valley AB)	N	NA-T
CO	Los Angeles County (South Coast AB)	N	NA-T
Sulfates	San Bernardino County Portion of Searles Valley Planning Area (Mojave Desert AB)	N	A
PROPOSED AREA DESIGNATIONS FOR PM_{2.5}			
Air Basin	Area Included	Proposed Designation*	
Mojave Desert	Central San Bernardino County (portion of San Bernardino County within the federal Southeast Desert Modified AQMA for ozone)	N	
Mountain Counties	Portola Valley area of Plumas County	N	
Sacramento Valley	Butte and Sacramento counties; portion of Placer County within air basin	N	
Salton Sea	City of Calexico in Imperial County	N	
San Diego	Entire air basin	N	
San Francisco Bay Area	Entire air basin	N	
San Joaquin Valley	Entire air basin	N	

PROPOSED AREA DESIGNATIONS FOR PM_{2.5} (continued)		
<i>Air Basin</i>	<i>Area Included</i>	<i>Proposed Designation*</i>
South Central Coast	Ventura County (including Anacapa and San Nicolas islands)	N
South Coast Air Basin	Entire air basin (including San Clemente and Santa Catalina islands)	N
Lake County	Entire air basin	A
Great Basin Valleys	Entire Air Basin	U
Lake Tahoe	Entire Air Basin	U
Mojave Desert (remainder)	Remainder of San Bernardino County; portion of Kern County, portion of Los Angeles County, and portion of Riverside County within air basin	U
Mountain Counties (remainder)	Remainder of Plumas County; Amador, Calaveras, Mariposa, Nevada, Sierra, and Tuolumne counties; portion of El Dorado County and portion of Placer County within air basin	U
North Central Coast	Entire air basin	U
North Coast	Entire air basin	U
Northeast Plateau	Entire air basin	U
Sacramento Valley (remainder)	Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba counties; portion of Solano County within air basin	U
Salton Sea (remainder)	Remainder of Imperial County and portion of Riverside County within air basin	U
South Central Coast (remainder)	San Luis Obispo and Santa Barbara counties (including San Miguel, Santa Barbara, Santa Cruz, and Santa Rosa islands)	U

*** Designation Categories:**

- A = Attainment; N = Nonattainment; NA-T = Nonattainment-Transitional; U = Unclassified. The Unclassified designation indicates no or insufficient air quality data.

Other Information in this Staff Report

As required by State law, this staff report also includes maps and tables identifying areas with at least one violation of a State standard or national ambient air quality standard (national standard). The maps and tables provided in Attachment C to this staff report fulfill the statutory requirement and reflect the proposed area designations for State standards that are summarized above. The maps and tables also reflect the area designations for national standards in effect at the time this staff report was published.

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CHAPTER I BACKGROUND

A. INTRODUCTION

This chapter provides background information on the differences between the State and national ambient air quality standards, the legal requirements for the designation criteria and area designations, the implications of being designated for the various pollutants, and the public process used in developing the proposed amendments to the regulations. Subsequent chapters discuss the proposed changes to the area designation criteria and the proposed 2003 area designations for State standards.

B. STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

To protect public health, the Board has adopted health-based ambient (outdoor) air quality standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. Ambient air quality standards are established to protect even sensitive individuals in our communities. California law requires the ARB to set State ambient air quality standards (State standards) in consideration of public health, safety, and welfare.

Before 2002, the Board had adopted State standards for nine pollutants: ozone, carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles. In June 2002, the Board adopted a new State standard for fine particulate matter or PM_{2.5}. The State PM_{2.5} standard is 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), measured as an annual arithmetic mean. When the Board adopted the State PM_{2.5} standard, it also made modifications to the existing State PM₁₀ and sulfates standards. The Board lowered the existing State annual PM₁₀ standard from 30 $\mu\text{g}/\text{m}^3$ to 20 $\mu\text{g}/\text{m}^3$ and revised the averaging method (from an annual geometric mean to an annual arithmetic mean). In addition, the Board changed the measurement method for the State sulfates standard, but left the level of the standard unchanged at 25 $\mu\text{g}/\text{m}^3$ for a 24-hour averaging time. The old method for sulfates was based on total suspended particulate matter or TSP measurements, while the new method is based on PM₁₀ measurements. All of these changes became effective on July 5, 2003.

In addition to the State standards, the Federal Clean Air Act requires the United States Environmental Protection Agency (U.S. EPA) to set national ambient air quality standards (national standards) for the nation. It also permits states to adopt additional or more health-protective standards. California's State standards for certain pollutants

are more protective of public health than national standards. In addition, California has established State standards for other pollutants that are not covered by national standards (for example, sulfates, hydrogen sulfide, and visibility reducing particles).

An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.

The national standards are further categorized as primary standards and secondary standards. The national primary standards are meant to protect public health. The national secondary standards are meant to protect the public welfare from any known or anticipated adverse effects of the pollutant. The national standard area designation maps and tables in Attachment C to this staff report reflect the national primary standards. Attachment C also contains a table that lists the applicable pollutant levels, averaging times, and analytical measurement methods for both the State standards and the national standards.

The U.S. EPA promulgated new ozone and PM_{2.5} national standards in July 1997. These new national standards have been the subject of many legal challenges, and the U.S. EPA has not yet promulgated the area designations. However, U.S. EPA is expected to make these area designations by the end of 2004. Because the area designations for the new federal ozone and PM_{2.5} standards are not yet final, maps and tables for these standards are not included in Attachment C to this staff report. However, interested persons can contact U.S. EPA for the current status of the new national standards, or visit their web site at:

<http://www.epa.gov/ttn/oarpg/naaqsfm>

C. LEGAL REQUIREMENTS

Health and Safety Code (H&SC) section 39607(e) requires the Board to establish and periodically review criteria for designating areas as attainment or nonattainment for the State standards. The Board originally adopted the required designation criteria in June 1989. The Board subsequently amended the designation criteria in June 1990, May 1992, December 1992, November 1993, November 1995, and September 1998. The criteria describe the procedures that the Board must use in determining area designations for State standards and are summarized in Chapter II.

H&SC section 39608 requires the Board to use the designation criteria in designating areas of California as attainment, nonattainment, or unclassified for the State standards. H&SC section 39608 also requires the Board to conduct an annual review

of the area designations and update them as new information becomes available. As warranted, the Board makes changes to the existing area designations, as well as making area designations for any new or revised State standards.

The area designations are made on a pollutant-by-pollutant basis, for all pollutants listed in the California Code of Regulations (CCR), title 17, section 70200. This year marks the first time the Board will make area designations for the new State fine particulate matter or PM_{2.5} standard that the Board adopted in June 2002. Because the State PM_{2.5} standard is listed in CCR, title 17, section 70200, it is automatically included in the area designation process.

In addition to the designation criteria and area designation requirements, H&SC section 40718 requires the Board to publish maps showing the areas with one or more measured violations of any State standard or national standard. The maps and summary tables provided in Attachment C of this staff report fulfill this requirement. The maps and tables for the State standards reflect the changes to the area designations as described in Chapter IV of this staff report. The maps and tables for the national standards reflect the current federal area designations, as promulgated by U.S. EPA (for additional information about the area designations for national standards, visit the U.S. EPA website at:

<http://www.epa.gov/airprogm/oar/oaqps/greenbk>

D. IMPLICATIONS OF THE STATE AREA DESIGNATIONS

The State designation criteria specify four designation categories: nonattainment, nonattainment-transitional, attainment, and unclassified. A nonattainment designation indicates a violation of the State standard. A nonattainment-transitional designation indicates improving air quality, with occasional violations or exceedances of the State standard. In contrast, an attainment designation indicates no violation of the State standard. Finally, an unclassified designation indicates either no or incomplete air quality data. Although the area designations themselves are simply labels indicating the healthfulness of air quality and do not contain any requirements for action, there may be other legal requirements, based on an area's designation status, as described below.

1. Requirements for Areas Designated as Nonattainment

An air pollution control district or air quality management district (district) that includes an area designated as nonattainment for a particular pollutant, experiences several consequences under the law. First, State law requires nonattainment districts to develop plans for attaining the State standards for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide. The nonattainment districts must submit these attainment plans to the Board for approval (H&SC section 40911). Ozone nonattainment districts that are impacted by transport from upwind areas (in other words, ozone violations are caused by emissions transported from upwind areas located outside the district) are

required to develop ozone attainment plans to mitigate those violations that occur in the absence of transport (in other words, ozone violations that are caused by locally generated emissions; H&SC sections 39610(b) and 40912). Violations caused by a combination of transported and locally generated emissions must be mitigated by both the upwind and downwind areas. Ozone violations caused by overwhelming transport must be mitigated by the responsible upwind district(s).

In addition to these requirements for nonattainment districts, recent legislation added specific requirements for PM10 and PM2.5 nonattainment areas. On October 8, 2003, Senate Bill 656 (Sher) was signed by the Governor. This new law requires the ARB to develop and adopt a list of the most readily available, feasible, and cost-effective control measures to reduce PM10, PM2.5, and their precursor emissions, by January 1, 2005. The list of measures will be developed in consultation with the districts, with the intent of making progress toward attaining the State and national PM2.5 and PM10 standards. These control measures are to be based on rules, regulations, and programs in effect in California as of January 1, 2004. Emission source categories to be addressed include stationary combustion sources, woodstoves and fireplaces, commercial grilling operations, agricultural burning, construction and grading operations, and diesel powered engines used in stationary and mobile applications. By July 31, 2005, the ARB and districts shall adopt implementation schedules for the identified measures.

Finally, a district with an area designated as nonattainment for any of the remaining pollutants is not subject to any specific statutory planning requirements. However, such districts must adopt and enforce rules and regulations to expeditiously attain the State standards for these pollutants (H&SC sections 40001 and 40913). Furthermore, a nonattainment district has the option of developing and implementing an attainment plan or adopting regulations to control the emissions that contribute to these pollutants (H&SC section 40926).

The second consequence of a nonattainment designation is that the Board collects permit fees from large, nonvehicular sources located in the nonattainment area (H&SC section 39612; CCR, title 17, sections 90800.5 through 90802). Only those sources authorized by district permit to emit 250 tons per year or more of any nonattainment pollutant or its precursors are subject to these permit fees. The fees are used to help defray the costs of State programs related to nonvehicular sources (Note: The Board adopted the fee regulations described above in July 2003. However, the fee regulations are not yet effective, as the Board has not yet completed the State Office of Administrative Law process). With certain exceptions, nonattainment districts are authorized to levy a fee of up to \$4.00 on motor vehicles registered in the district for the purposes of California Clean Air Act implementation (H&SC sections 44223 and 44225).

2. Areas Designated as Nonattainment-Transitional

Nonattainment-transitional is a subcategory of the nonattainment designation. Therefore, a district with a nonattainment area that is redesignated as

nonattainment-transitional is still subject to the same requirements as a nonattainment district, which were described in the preceding section. However, in contrast to the nonattainment designation, a nonattainment-transitional designation may signal a change in how these requirements are implemented. For example, a district that currently is implementing an approved attainment plan may determine that some of the additional control measures contained in the attainment plan are not needed to reach attainment by the earliest practicable date. As a result, the nonattainment-transitional designation provides the district with a signal that it may be appropriate to review, and perhaps modify, its approved attainment plan. However, district actions in response to a nonattainment-transitional designation must be consistent with State and federal regulations and statutes.

H&SC section 40925.5 specifically allows a district with an area designated as nonattainment-transitional for ozone to shift some stationary source control measures from the rulemaking calendar to the contingency category if the district finds these control measures are no longer necessary to accomplish expeditious attainment of the State ozone standard. These actions do not apply to control measures required to mitigate the effects of pollutant transport. The Board may disapprove any action of the district within 90 days if the Board finds that the action will delay expeditious attainment of the State ozone standard.

3. Areas Designated as Attainment or Unclassified

State law does not impose any specific planning requirements upon districts with areas designated as attainment or unclassified. However, State law does require that the State standards not only be attained but also, maintained. State law requires the districts and the Board to make a coordinated effort to protect and enhance the ambient air quality (H&SC sections 39001 through 39003). As part of this effort, the districts must adopt rules and regulations sufficiently effective to achieve and maintain the State standards (H&SC sections 40001 and 41500).

E. PUBLIC PROCESS

The H&SC requires the Board to periodically review the criteria it uses for making State area designations. Furthermore, both the H&SC (section 39608) and the designation criteria (CCR, title 17, section 70306) require the Board to review the area designations annually and to redesignate areas as new information becomes available. In order to facilitate public comment during the designation process, we requested public input in a number of ways.

After our initial review of the 2000 through 2002 air quality data, we noted potential changes to the existing area designations for ozone, carbon monoxide, and sulfates. We also conducted a preliminary assessment of the PM_{2.5} data and determined the likely area designations for the new State PM_{2.5} standard. After these preliminary reviews, we contacted the affected districts to discuss the results of the review. These discussions included the basis for the designation change, additional information

relevant to the designation change, and an opportunity for district input. Furthermore, we encouraged districts to submit any other information they would like considered. We also established a web-based subscriber notification process or listserve. For those who subscribe, the listserve provides automatic electronic updates related to the designation criteria and area designation issues.

On September 23, 2003, we announced a public workshop scheduled for October 15, 2003. This announcement included a discussion of the staff's proposed amendments to both the designation criteria and the area designations. The proposed changes to the area designations are based on most recent three complete calendar years of air quality data: 2000 through 2002.

At the October 15, 2003, workshop, we presented the preliminary proposed changes to the designation criteria and the area designations for State standards. In addition, all materials available at the workshop were posted on our web page, including the workshop notice, the workshop slide presentation, the full text of the proposed changes to the designation criteria regulations, the rationale for the proposed changes to the designation criteria, the procedure for designating areas with respect to the State PM10 and PM2.5 standards, and a list of proposed changes to the area designations for State standards.

The proposed amendments described in this staff report incorporate comments received from the public. The Board is scheduled to consider these amendments at a public hearing in January 2004.

CHAPTER II

CURRENT AREA DESIGNATION CRITERIA

A. INTRODUCTION

This chapter provides a summary of the existing designation criteria. The following sections describe the general provisions of the designation criteria, the area designation categories, the data requirements, the size of the designated areas, and the requirements for identifying highly irregular or infrequent events. The full text of the designation criteria is included in Attachment A to this staff report.

B. GENERAL PROVISIONS OF THE DESIGNATION CRITERIA

The designation criteria describe the procedures the Board must use in determining an area's designation status with respect to the State standards. In summary, the designation criteria specify:

- The requirements for each area designation category;
- The data the Board will use for making the area designations;
- How the Board will determine the size of a designated area; and
- The requirement for an annual review of the area designations by the Board's Executive Officer.

C. DESIGNATION CATEGORIES

In determining which designation category is appropriate for an area, it is essential to understand the difference between an *exceedance* and a *violation*. An exceedance is any concentration that is higher than the level of the State standard. In contrast, violations are a subset of the exceedances. A violation is any exceedance (concentration above the level of the State standard) that is not affected by a highly irregular or infrequent event, and therefore, cannot be excluded from the area designation process (refer to discussion in Section F, below).

The designation criteria specify four designation categories: nonattainment, nonattainment-transitional, attainment, and unclassified. The Board will designate an area as *nonattainment* for a pollutant if air quality data show that a State standard for the pollutant was violated at least once during the previous three calendar years. As explained above, exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating an area as nonattainment.

The *nonattainment-transitional* designation is a subcategory of nonattainment. The Board will designate an area as nonattainment-transitional for a pollutant other than ozone if air quality data show that a State standard for that pollutant was violated two or fewer times at each of the sites in the area during the most recent calendar year. In addition, an evaluation of recent air quality trends and meteorological and emissions data must show that air quality in the area either has stabilized or has improved. Finally, each site in the area must be expected to reach attainment for the pollutant within three years.

The nonattainment-transitional subcategory can also apply for ozone. However, unlike the other pollutants, the ozone nonattainment-transitional requirements are specified in State law (H&SC section 40925.5), and the designation criteria set forth guidelines for evaluating whether an area satisfies the H&SC requirements. Furthermore, in contrast to the nonattainment-transitional designation for other pollutants, the ozone nonattainment-transitional designation occurs by operation of law. This means the ozone nonattainment-transitional designations occur automatically, without any formal Board action.

H&SC section 40925.5 specifies that the ozone nonattainment-transitional designation is based on exceedances, not violations. As a result, all measurements above the level of the State ozone standard are considered. Specifically, a nonattainment district (or the portion of a district within an air basin) is designated as nonattainment-transitional for ozone if air quality data show three or fewer exceedances of the State standard at each site in the area during the most recent calendar year. Because the ozone nonattainment-transitional designation is based on a single year of data, it can be unstable due to year-to-year changes in meteorology. To provide more stability, the designation criteria allow for a review of data collected during the current calendar year. If data for the current year show more than three exceedances at any monitoring location in the area, thereby ensuring the area would not qualify as nonattainment-transitional during the next annual review, the area remains designated as nonattainment. This approach prevents districts from going in and out of nonattainment-transitional from one year to the next.

In contrast to nonattainment and nonattainment-transitional, the Board will designate an area as *attainment* for a pollutant if data show the State standard for that pollutant was not violated during the previous three calendar years. As described earlier, exceedances affected by highly irregular or infrequent events are not considered violations, and therefore, are not considered in designating areas as attainment. As a result, an area can have measured concentrations that are higher than the level of the State standard and still be designated as attainment. Finally, the Board will designate an area as *unclassified* for a pollutant if the available data do not support a designation of nonattainment or attainment.

D. DATA REQUIREMENTS

To the extent possible, the Board makes area designations for each pollutant based on the most recent ambient air quality data. The air quality data must be *data for record*, which are those air quality data that satisfy specific siting and quality assurance procedures established by the U.S. EPA and adopted by the Board. Generally, data for record are those data collected by or under the direction of the Board or the districts. Air quality data from other sources may also qualify as data for record, as long as the same requirements are met. For area designation purposes, air quality measurements and statistics are rounded to the precision of the State standard before being compared with the State standard. The rounding convention is summarized in Attachment D to this staff report.

When adequate and recent air quality data are not available, the Board may use other types of information to determine an appropriate area designation. These other types of information may include historical air quality data, emissions data, meteorological data, topographical data, and data relating to the characteristics of population or emissions.

E. SIZE OF DESIGNATED AREA

The size of the area designated for a pollutant may vary depending on the nature of the pollutant, the location of contributing emission sources, meteorology, and topographic features. Normally, an air basin is the area designated for ozone, nitrogen dioxide, suspended particulate matter, sulfates, and visibility reducing particles. A county (or the portion of a county located within an air basin) is normally the area designated for carbon monoxide, sulfur dioxide, lead, and hydrogen sulfide. In both cases, however, the Board may designate a smaller area if the Board finds that the smaller area has distinctly different air quality. This finding is based on a review of the air quality data, meteorology, topography, and the distribution of population and emissions. In designating a smaller area as nonattainment, the sources with emissions that contribute to a violation must be included within the designated area. In defining a smaller designation area, the Board uses political boundary lines whenever possible.

F. HIGHLY IRREGULAR OR INFREQUENT EVENTS

While area designations for State standards are based on ambient air quality data, the designation criteria provide for excluding certain high values. In particular, the designation criteria provide for excluding exceedances affected by *highly irregular or infrequent events* because it is not reasonable to mitigate these exceedances through the regulatory process. Appendix 2 to the designation criteria defines three types of highly irregular or infrequent events:

- Extreme concentration events;
- Exceptional events; and
- Unusual concentration events.

An *extreme concentration event* is identified by a statistical procedure that calculates the concentration that is not expected to occur more frequently than once per year. This value is commonly referred to as the Expected Peak Day Concentration or EPDC. Adverse meteorology is one potential cause of an extreme concentration event. However, a specific, identifiable cause is not necessary for an exceedance to be identified as an extreme concentration.

In practice, a pollutant-specific EPDC is calculated for each monitoring site using air quality data measured at the site during the most recent three calendar years. The EPDC value is rounded to the precision of the State standard and then compared with the air quality measurements from the same site, which are also rounded to the precision of the State standard. Air quality measurements that exceed the State standard and are higher than the EPDC value, are excluded from the area designation process. These exceedances are not considered violations of the State standard. However, air quality measurements that exceed the State standard and are equal to or lower than the EPDC value are not excluded from the area designation process. These values are considered violations of the State standard.

In contrast to an extreme concentration event, an *exceptional event* is a specific, identifiable event that causes an exceedance of a State standard but is beyond reasonable regulatory control. An exceptional event may be caused by an act of nature (for example, a forest fire or a severe wind storm) or it may be of human origin (for example, a chemical spill or industrial accident).

Finally, an *unusual concentration event* is an unexpected or atypical exceedance of a State standard that cannot be identified as an extreme concentration event or an exceptional event. Unusual concentration events are identified only for areas already designated as attainment or unclassified at the time of the exceedance. In identifying such events, the Executive Officer must make specific findings based on relevant information. Generally, unusual concentration events are identified in areas with limited air quality data, and therefore, uncertainty as to what level of concentrations are expected to occur.

The unusual concentration event allows a wait-and-see approach in making nonattainment designations. However, there is a time limit. An area may retain its attainment or unclassified designation based on the exclusion of one or more exceedances affected by an unusual concentration event for up to three consecutive years. If an exceedance occurs during the fourth year, the area is redesignated as nonattainment, unless the exceedance can be excluded as an extreme concentration event or an exceptional event. The idea behind this time limit is that within three years, the air quality data record should be complete enough to determine whether the area is attainment or nonattainment.

CHAPTER III

PROPOSED AMENDMENTS TO THE AREA DESIGNATION CRITERIA

A. INTRODUCTION

H&SC section 39607(e) requires the Board to establish area designation criteria. These designation criteria provide the basis for the Board to designate areas as nonattainment, nonattainment-transitional, attainment, or unclassified for the State standards, as required by H&SC section 39608.

H&SC section 39607(e) further requires the Board to periodically review the designation criteria to ensure their continued relevance. As part of the current review, the ARB staff recommends amending several provisions of the designation criteria. One amendment would add PM_{2.5} to the list of pollutants designated by air basin. The remaining amendments are either for clarification purposes or to make language within the designation criteria consistent. As a result, these amendments would not change the way in which the Board makes the area designations. All of the proposed amendments are summarized below and described in the following sections. The full text of the proposed amendments, in underline and strikeout format, can be found in Attachment A to this staff report.

- *Add PM_{2.5} to the list of pollutants specified in section 70302(a) as designated by air basin.*
- *Add language to section 70303.5(a)(1) to clarify the circumstances for designating a portion of a district within an air basin as nonattainment-transitional for ozone.*
- *Expand the discussion in Appendix 1: Criteria for Determining Data Representativeness and make two minor changes to the accompanying table, in order to clarify the procedure.*
- *Expand the discussion in Appendix 3: Criteria for Determining Data Completeness to clarify the procedure.*
- *Clarify within the existing designation criteria that the word "standard" refers to a "State" standard.*
- *Clarify within the existing designation criteria that the "appendices" referenced are appendices to the designation criteria.*

**B. SECTION 70302:
GEOGRAPHIC EXTENT OF DESIGNATIONS**

Section 70302 of the designation criteria describes the geographic extent of the areas designated for each pollutant for which the Board makes area designations. Currently, section 70302 addresses the nine criteria pollutants for which State standards were in effect prior to 2003. These pollutants are: ozone, carbon monoxide, suspended particulate matter (PM10), nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles.

In 2002, the Board adopted a new State standard for fine particulate matter or PM2.5. The new State PM2.5 standard, which became effective on July 5, 2003, is 12 micrograms per cubic meter, expressed as an annual arithmetic mean. Similar to the other nine criteria pollutants, the State PM2.5 standard is listed in CCR, title 17, section 70200 (Table of Standards). Because the designation criteria apply to all pollutants for which State standards have been established in CCR, title 17, section 70200, PM2.5 is already included under the general provisions of the designation criteria. However, PM2.5 is not yet included in section 70302 of the designation criteria, which specifies the geographic extent of the area designated for each pollutant.

PM2.5 is a subset of PM10. It comprises a mixture of fine particles, many of which are secondary particles that are formed in the atmosphere. Because of their smaller size, PM2.5 particles can remain suspended in the air for long periods of time. The emissions that form PM2.5 come primarily from combustion sources. Throughout California, the major types of sources contributing to ambient PM2.5 concentrations include mobile sources, stationary sources, and biomass burning (which includes wood smoke and agricultural prescribed burning). While the extent of PM2.5 concentrations dominated by wood smoke may be more localized, PM2.5 concentrations dominated by mobile and stationary sources tend to be more regional in extent. Therefore, it is reasonable to specify a large geographic area as the default designation area for PM2.5.

Section 70302 of the designation criteria specifies two default sizes for the designation area: an air basin for the regional pollutants (ozone, nitrogen dioxide, PM10, sulfates, and visibility reducing particles) and a county for the local pollutants (carbon monoxide, sulfur dioxide, lead, and hydrogen sulfide). The staff proposes amending section 70302(a) of the designation criteria to add PM2.5 to the list of pollutants designated by air basin. Similar to the other pollutants listed in section 70302(a), the Board could designate smaller areas for PM2.5, as long as the Board finds that the smaller area has distinctly different air quality, deriving from sources and conditions not affecting the entire air basin. To the extent practical, these smaller areas would be defined along political boundary lines.

**C. SECTION 70303.5:
REQUIREMENTS FOR OZONE NONATTAINMENT-TRANSITIONAL**

Under State law in H&SC section 40925.5(a), a district is designated as nonattainment-transitional for the State ozone standard by operation of law, if its air quality meets certain conditions. To help implement this requirement, the Board added section 70303.5 to the designation criteria in December 1992. Section 70303.5 contains a set of guidelines for use in evaluating whether a district satisfies the requirements of H&SC section 40925.5(a).

In September 1998, the Board amended section 70303.5 to clarify that the nonattainment-transitional designation for ozone applies to a district or an area that is a portion of a district within an air basin. This is important in those cases where a district spans more than one air basin. The Board wanted to ensure that if the portion of a district within one air basin became nonattainment-transitional, that portion could be designated as nonattainment-transitional before those portions of the same district located in another air basin(s) qualified as nonattainment-transitional. The current language of section 70303.5 does not clearly specify that the portion of a district within an air basin should not be split in making a nonattainment-transitional designation.

The staff recommends adding language to section 70303.5(a)(1) to clarify how districts spanning more than one air basin are designated as nonattainment-transitional for ozone. The language would specify that an *entire* district or *entire portion* of a district within an air basin will be the area designated as nonattainment-transitional for ozone. These proposed amendments are for clarification only and do not change the way in which the ozone nonattainment-transitional designations are currently made.

**D. APPENDIX 1:
CRITERIA FOR DETERMINING DATA REPRESENTATIVENESS**

Appendix 1: Criteria for Determining Data Representativeness (Representativeness Criteria) describes the criteria the Board uses in determining whether an individual air quality measurement or statistic represents the averaging time specified in the State standard to which it is being compared. Under the designation criteria, air quality measurements and statistics used for making designations of nonattainment, nonattainment-transitional, and attainment must be representative.

The Representativeness Criteria lay out specific conditions that each individual air quality measurement or statistic (for example, an individual 8-hour average carbon monoxide concentration or a single annual average PM10 concentration) must satisfy in order to be deemed representative. These conditions generally require that a minimum of 75 percent of all the potential measurements be available.

The current Representativeness Criteria comprise a short description of the criteria, along with a table that sets out the specific criteria. Since the Board adopted the

designation criteria in June 1989, the table associated with the Representativeness Criteria has been a source of confusion. The table lists the minimum requirements for each averaging time, starting with the averaging time of the initial measurement (usually 1-hour or 24-hours) and moving up from there, to an annual averaging time. It is possible that a person unfamiliar with using the Representativeness Criteria may not understand how far up the table one must go in order to determine that an air quality measurement or statistic is representative.

To alleviate this confusion, the staff proposes to expand the discussion in Appendix 1: Criteria for Determining Data Representativeness to clarify the procedure for determining data representativeness. The staff also proposes two minor clarifying changes to the accompanying table. The first change would clarify the requirements for pollutants that are not sampled on a daily basis (for example, some PM samples are collected on a 1-in-6 day, 1-in-3 day, or 1-in-2 day sampling schedule—infrequent sampling). The second change would clarify that a daily statistic based on 3-hour samples is based on *all* 3-hour samples. None of these proposed amendments change the way in which the Board currently determines data representativeness or area designations.

**E. APPENDIX 3:
CRITERIA FOR DETERMINING DATA COMPLETENESS**

Appendix 3: Criteria for Determining Data Completeness (Completeness Criteria) describes the criteria the Board uses in determining whether a group or set of individual air quality measurements or statistics is sufficient to reflect the time of day and season of the year during which high concentrations are expected to occur. Under the designation criteria, the set of air quality measurements, or statistics used for making designations of attainment or nonattainment-transitional, must be complete.

The staff proposes adding language to the Completeness Criteria to clarify that these criteria apply only to data used for making attainment and nonattainment-transitional designations. Furthermore, the proposed amendments clarify that air quality data are evaluated under the Completeness Criteria after they are first evaluated under the Representativeness Criteria. Finally, the staff proposes adding language to clarify that the “Required Years” portion of the Completeness Criteria apply only for attainment designations. These proposed amendments do not change the way in which the Board currently determines data completeness or area designations.

F. OTHER AMENDMENTS

The staff proposes two other minor amendments to the designation criteria. The first change would clarify within the existing designation criteria that the word “standard” refers to a State standard and not a national standard. The designation criteria in sections 70300 through 70306 and appendices 1 through 4, thereof, apply only to the State standards. In some cases, the State standards are specifically referenced. In

other cases, they are referenced only as the standards. To clarify that the State standards are the only ones subject to the provisions in the designation criteria and to make the references consistent throughout the designation criteria, the staff proposes adding the word "state" before all references to a standard. These proposed amendments are for clarification only and affect sections 70302, 70303, 70303.1, and 70304 and Appendix 2.

In addition, the staff proposes to clarify that the "appendices" referenced in the designation criteria are the appendices to the designation criteria. The ARB staff proposes adding the words "*to this article*" to sections 70303.1 and 70303.5 and Appendix 3 to clarify that the appendix referenced is an appendix to the designation criteria. Again, these proposed amendments are for clarification purposes only and do not change the way in which the Board currently determines the area designations.

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CHAPTER IV

PROPOSED AMENDMENTS TO THE AREA DESIGNATIONS

A. INTRODUCTION

This chapter describes the area designation process and the proposed changes to the area designation regulations. As required by H&SC section 39608, the Board updates the area designations each year, based on a review of the most recent air quality data. This year's review is based on air quality data collected during the calendar years 2000 through 2002. The Board's update of the area designations includes changes warranted to existing area designations, as well as new area designations for revised or recently adopted State standards. These proposed changes amend the existing CCR, title 17, sections 60200 through 60209 and add new section 60210. Furthermore, the proposed amendments must be adopted by the Board and approved by the Office of Administrative Law before they become effective.

Based on data collected during 2000 through 2002, the staff is proposing a number of changes to the area designation regulations, as summarized below. The staff proposes updating and adding to the description of non-county areas set forth in section 60200. With respect to the area designations themselves, changes in area designation status are appropriate for ozone, CO, and sulfates. In addition, area designations are being proposed for the first time for the recently adopted State PM2.5 standard. Although the Board modified the State annual PM10 standard, a review of the air quality data indicated no change to the existing State PM10 area designations. Furthermore, no changes are proposed for the remaining pollutants: nitrogen dioxide, sulfur dioxide, lead, hydrogen sulfide, and visibility reducing particles.

- *Proposed Changes to Description of Non-County Areas (section 60200):*
 - *Update description of the city of Calexico to reflect the current boundary.*
 - *Add description of San Bernardino County portion of federal Southeast Desert Modified AQMA.*
 - *Add description of Portola Valley area of Plumas County.*
- *Proposed Changes to Ozone Area Designations (section 60201):*
 - *Redesignate San Luis Obispo County and North Coast Air Basin portion of Sonoma County as Attainment.*
 - *Redesignate Butte County and North Central Coast Air Basin as Nonattainment (occur by operation of law).*
 - *Redesignate Colusa County as Nonattainment-Transitional (occurs by operation of law).*

- *Proposed Changes to Carbon Monoxide Area Designations (section 60202):*
 - *Redesignate South Coast Air Basin portion of Los Angeles County as Nonattainment-Transitional.*
- *Proposed Changes to Sulfates Area Designations (section 60206):*
 - *Redesignate San Bernardino County portion of Searles Valley Planning Area as Attainment.*
- *Proposed New PM2.5 Area Designations (section 60210):*
 - *Designate Lake County Air Basin as Attainment.*
 - *Designate San Diego Air Basin, San Francisco Bay Area Air Basin, San Joaquin Valley Air Basin, South Coast Air Basin, Butte County, Sacramento County, Sacramento Valley Air Basin portion of Placer County, city of Calexico, Portola Valley portion of Plumas County, and San Bernardino County portion of federal Southeast Desert Modified AQMA as Nonattainment.*
 - *Designate Great Basin Valleys Air Basin, Lake Tahoe Air Basin, North Central Coast Air Basin, North Coast Air Basin, Northeast Plateau Air Basin, remainder of Mojave Desert Air Basin, remainder of Mountain Counties Air Basin, remainder of Sacramento Valley Air Basin, remainder of Salton Sea Air Basin, and remainder of South Central Coast Air Basin as Unclassified.*

B. DESIGNATION PROCESS

The area designations are based on air quality data for record as defined in section 70301 of the designation criteria (for reference, the full text of the designation criteria is contained in Attachment A to this staff report). Data for record must meet established siting and quality assurance procedures. Generally, data for record are those data collected by the Board or the districts. However, data from other sources may also be considered, as long as they satisfy the established procedures.

The process used to designate an area with respect to a State standard is generally the same for each of the ten pollutants:

- Gather data for the three-year period for each site in the area.
- Evaluate data representativeness and data completeness for each site.
- Identify and exclude exceedances affected by highly irregular or infrequent events.
- Tabulate the number of exceedances and violations by site.
- Determine the designation value for each site in the area.
- Determine the designation value for the area.
- Determine the appropriate area designation category.

Determining the designation value is the most critical part of the designation process because the designation value determines, in large part, the area designation. More detail about the designation value and how it is determined, is given in the following section.

C. DESIGNATION VALUE

The *designation value* is the measured concentration that is used to determine the designation status of a given area. The designation value is defined as follows:

The designation value is the highest measured concentration that remains after excluding measurements identified as affected by highly irregular or infrequent events. A designation value is determined for each pollutant, for each monitoring site in an area. The highest designation value for any site in the area becomes the designation value for the area.

Under Appendix 2 to the designation criteria, there are three types of highly irregular or infrequent events: extreme concentration events, exceptional events, and unusual concentration events. Each of these types of events is described more fully in Chapter II. The extreme concentration event is the most frequently used method for excluding values from the designation process. Using a statistical process, the ARB staff computes a site-specific and pollutant-specific value representing the highest concentration expected to occur once per year, based on the distribution of data for the site. The resulting value is called the Expected Peak Day Concentration or EPDC. The measured or averaged (for example, 8-hour averages) pollutant concentrations are compared with the EPDC value, and any concentrations that are higher than the EPDC are excluded as extreme concentration events. The highest remaining concentration then becomes the designation value for the site, unless it is excluded as an exceptional event or unusual concentration event.

For example, consider a site with an ozone EPDC of 0.096 parts per million (ppm), and four high measured concentrations of 0.125 ppm, 0.113 ppm, 0.102 ppm, and 0.094 ppm. The ozone EPDC is rounded to 0.10 ppm (2 decimal places, which is the precision of the State ozone standard; refer to Attachment D to this staff report for a more detailed discussion of the rounding convention used in area designations). The four ozone measurements are also rounded to two digits, becoming 0.13 ppm,

0.11 ppm, 0.10 ppm, and 0.09 ppm, respectively. The measurements of 0.13 ppm and 0.11 ppm are higher than the EPDC, and therefore, are excluded from the area designation process. The next highest measurement, 0.10 ppm is equal to or lower than the EPDC, so it is not excluded. Since 0.10 ppm is the highest measured value not excluded, it becomes the ozone designation value for the site. Within a designated area, the highest designation value for any site in the area becomes the designation value for the area.

When there are less than three complete years of air quality data for a site, the EPDC may not be valid for area designation purposes. If the EPDC is not valid, no measurements are excluded as extreme concentration events. In this case, the designation value for a site is simply the highest measured concentration during the specified three-year period, after excluding measurements affected by exceptional events or unusual concentration events.

D. OZONE

The State standard for ozone is a one-hour average concentration of 0.09 ppm, not to be exceeded. Based on data collected during 2000 through 2002, five areas qualify for a change in ozone designation. As summarized in Table 1, two areas qualify for redesignation as attainment, two areas qualify for redesignation as nonattainment, and one area qualifies for redesignation as nonattainment-transitional. Because the change from nonattainment to nonattainment-transitional for ozone occurs by operation of law, the change from ozone nonattainment-transitional back to nonattainment also occurs by operation of law. In contrast, a change from nonattainment-transitional to attainment for ozone requires Board action.

TABLE 1
Proposed Area Designations for the State Ozone Standard

Area	Current Designation	Proposed Designation
San Luis Obispo County (SCCAB)	NA-T	A
Sonoma County (NCCAB)	NA-T	A
Butte County (SVAB)	NA-T	N*
North Central Coast Air Basin	NA-T	N*
Colusa County (SVAB)	N	NA-T*

A = Attainment, NA-T = Nonattainment-Transitional, and N = Nonattainment,

* Change in designation occurs by operation of law.

1. Areas Redesignated as Attainment for Ozone

An attainment designation signifies clean and healthful air quality. The Board will redesignate an area as attainment for ozone if measured air quality data show that the State standard was not violated during the previous three calendar years. Furthermore, the air quality data must be representative of the averaging time of the standard, complete for the time period when high concentrations are likely to occur, and from a site expected to show high ozone concentrations.

The attainment designation is based on violations of the State standard. Exceedances identified as affected by highly irregular or infrequent events are not considered violations of the standard, and therefore, are excluded from the designation process. As a result, an area can have measured values that are above the level of the State standard and still be designated as attainment. Based on ozone data collected during 2000 through 2002, the staff proposes two areas be redesignated as attainment. The rationale for these redesignations is described below.

San Luis Obispo County (South Central Coast Air Basin)

San Luis Obispo County is located in the South Central Coast Air Basin (SCCAB). Currently, the County is designated as nonattainment-transitional for the State ozone standard. Consistent with requirements for the ozone nonattainment-transitional designation, San Luis Obispo County in the SCCAB coincides in area with the San Luis Obispo County Air Pollution Control District. The remaining portions of the SCCAB, Santa Barbara County and Ventura County, are designated as nonattainment.

During 2000 through 2002, six ozone monitoring sites were operating in San Luis Obispo County. During the three-year period, there were no measured exceedances of the State ozone standard. The ARB staff identified three County sites as high ozone sites: Paso Robles, Atascadero, and Morro Bay. Ozone data for Paso Robles and Atascadero are both representative and complete for all three years. However, data collected at Morro Bay are complete for 2001 and 2002, but not for 2000. During the month of August, 23 days are required for completeness (75 percent of 31 days). However, only 22 days are available for Morro Bay during August 2000. This is just shy of the required 23 days.

Because of one missing day, the August 2000 data record for Morro Bay does not meet the data completeness requirements set forth in the designation criteria. However, ARB staff conducted a very conservative analysis to determine whether there was a likelihood of ozone exceedances not only on one incomplete day, but on all nine of the incomplete August 2000 days. This included a review of the spatial ozone concentration patterns on each of the nine incomplete days during August 2000, as well as spatial ozone patterns on other days that exceeded the State ozone standard at Morro Bay. Based on a review of the ozone data, ARB staff concludes it was highly unlikely that ozone concentrations on the nine incomplete days exceeded the State ozone standard.

The nine incomplete days did not match the central California spatial patterns of widespread ozone exceedances on other days that exceeded the State ozone standard at Morro Bay. To the contrary, ARB staff found that ozone exceedances were limited to the San Joaquin Valley Air Basin (SJVAB) on eight of the nine days, with no exceedances on the remaining day. On four of these eight SJVAB exceedance days, exceedances were limited to the areas immediately downwind of Fresno and Bakersfield, while exceedances on the remaining four days were limited to the Fresno and Bakersfield urban and downwind areas. Moreover, the lack of high ozone concentrations at other sites in San Luis Obispo County, the North Central Coast Air Basin to the north, and Santa Barbara County to the south, indicate that an ozone exceedance at Morro Bay was highly unlikely on the nine incomplete days. Therefore, the ARB staff concludes that San Luis Obispo County did not have any ozone violations during the three-year period.

The designation value for San Luis Obispo County is 0.09 ppm for both the Paso Robles-Santa Fe Avenue and Atascadero-Lewis Avenue monitoring sites. This designation value does not exceed the State ozone standard. In designating an area smaller than an air basin as attainment for ozone, the Board must find that air quality in the smaller area is distinctly different from the rest of the air basin. San Luis Obispo County is separated from the other two counties in the SCCAB by mountains, and its air quality is more closely linked with that of the San Francisco Bay Area and San Joaquin Valley than that of Santa Barbara County or Ventura County (ARB, April 2001). Furthermore, because of the differences in topography and air quality, the three counties in the SCCAB are treated as separate planning areas. These factors indicate that the ozone air quality in San Luis Obispo County is distinctly different from that in the rest of the SCCAB. Therefore, the ARB staff proposes that San Luis Obispo County in the SCCAB be redesignated as attainment for the State ozone standard.

Sonoma County (North Coast Air Basin Portion)

Sonoma County is split between two air basins. The southern portion is located in the San Francisco Bay Area Air Basin and the northern portion is located in the North Coast Air Basin (NCAB). Currently, all of the NCAB is designated as attainment for the State ozone standard except the northern portion of Sonoma County, which is designated as nonattainment-transitional. Consistent with requirements for the ozone nonattainment-transitional designation, the northern portion of Sonoma County in the NCAB coincides in area with the Northern Sonoma County Air Pollution Control District.

During 2000 through 2002, the only ozone monitor operating within northern Sonoma County was the Healdsburg-Municipal Airport site, which is considered a high concentration site. During the three-year period, the Healdsburg site did not measure any ozone exceedances. However, while data for 2000 and 2002 are both representative and complete, data are missing for 12 days during October 2001, thereby making the 2001 data incomplete.

Previous analyses indicate that all ozone violations measured at the Healdsburg site since 1996 were caused by the overwhelming transport of ozone or ozone precursor emissions from the San Francisco Bay Area Air Basin (ARB, March 2001). Additionally, staff found that ozone concentrations during the 12 missing days in October 2001 did not exceed the State standard in adjacent areas, including the San Francisco Bay Area Air Basin. Therefore, it is highly unlikely that sufficient ozone or ozone precursors could have been transported on these days to cause a State ozone violation at Healdsburg. Based on the data that are available, the highest measured concentrations at Healdsburg during the three-year period were concentrations of 0.09 ppm, measured during 2000 and 2001.

Based on these data, the staff concludes that northern Sonoma County did not have any ozone violations during the 2000 through 2002 time period, and proposes that the portion of Sonoma County in the NCAB be redesignated as attainment for ozone. This redesignation makes the entire NCAB attainment for the State ozone standard.

2. Areas Redesignated as Nonattainment for Ozone

The nonattainment designation signifies poor air quality. The Board will redesignate an area as nonattainment if air quality data for any site in the area show the State standard was violated at least once during the previous three calendar years. Because exceedances affected by highly irregular or infrequent events are not considered violations of the State standard, they are not used as a basis for redesignating an area as nonattainment. Based on data collected during 2000 through 2002, two areas qualify for redesignation as nonattainment for ozone. These redesignations are described in the following sections. Furthermore, because the areas are currently designated as nonattainment-transitional for ozone, the redesignation as nonattainment occurs by operation of law and does not require formal action by the Board.

Butte County (Sacramento Valley Air Basin)

Butte County is located in the Sacramento Valley Air Basin (SVAB). Currently, Butte County is designated as nonattainment-transitional for the State ozone standard. Glenn County is also designated as nonattainment-transitional, and the remainder of the SVAB is designated as nonattainment (*Note: although Colusa County is currently designated as nonattainment for ozone, the area qualifies for redesignation as nonattainment-transitional this year*).

During 2002, the Paradise-4405 Airport Road site had 17 exceedances of the State ozone standard. These exceedances ranged from 0.10 ppm to 0.11 ppm. The EPDC for the Paradise site is 0.10 ppm and is valid for the three-year period. When compared with the EPDC, four of the exceedances are excluded as extreme concentration events. However, the remaining 13 exceedances represent violations of the State ozone standard, and the designation value for the Paradise site is 0.10 ppm.

Similar to Paradise, the Chico-Manzanita Avenue site also had ozone violations. Four exceedances were measured at 0.10 ppm, which is above the level of the State standard. The EPDC for the Chico site is 0.10 ppm. Because none of the exceedances are higher than the EPDC, none are excluded and they are all considered violations of the State ozone standard. The designation value for the Chico site is 0.10 ppm.

Based on the violations at these two sites, Butte County in the SVAB no longer qualifies as nonattainment-transitional. Therefore, the area is redesignated as nonattainment for the State ozone standard by operation of law.

North Central Coast Air Basin

The North Central Coast Air Basin (NCCAB) is comprised of Monterey County, San Benito County, and Santa Cruz County. This three-county area comprises the Monterey Bay Unified Air Pollution Control District, and is currently designated as nonattainment-transitional for the State ozone standard.

During 2002, data for the Hollister-Fairview Road site showed four days with maximum 1-hour ozone concentrations exceeding the State standard. The exceedances on all four days were 0.10 ppm. The 2002 EPDC for the Hollister-Fairview Road site is also 0.10 ppm and is valid. Because the exceedances are not higher than the EPDC value, they are not excluded as extreme concentration events, and therefore, are considered violations of the State ozone standard.

During 2002, exceedances were also measured at the Pinnacles National Monument site. The Pinnacles data showed seven ozone exceedances. The concentrations on these seven days were 0.12 ppm, 0.11 ppm, and five measurements of 0.10 ppm. The EPDC for the Pinnacles site is valid and is 0.10 ppm. The two highest exceedances, 0.12 ppm and 0.11 ppm are excluded as extreme concentration events because they are higher than the EPDC value. However, the remaining five exceedances are not excluded and are considered violations of the State ozone standard. Therefore, 0.10 ppm becomes the designation value for the Pinnacles site.

The ozone nonattainment-transitional designation requires three or fewer exceedances at each site in the area during the most recent calendar year. Ozone data for both Hollister-Fairview Road and Pinnacles National Monument show more than three exceedances during 2002. As a result, the NCCAB no longer qualifies as nonattainment-transitional for ozone, and the NCCAB is redesignated as nonattainment for the State ozone standard by operation of law.

3. Area Redesignated as Nonattainment-Transitional for Ozone

Nonattainment-transitional is a subcategory of nonattainment. Under H&SC section 40925.5(a), the ozone nonattainment-transitional designation is made by operation of law. Specifically, the entire nonattainment district (or entire portion of a

district within an air basin) is designated as nonattainment-transitional if air quality data show that the State ozone standard was exceeded three or fewer times at each of the sites in the area during the most recent calendar year. In determining the ozone nonattainment-transitional designation, all exceedances are counted, regardless of whether the exceedance was affected by a highly irregular or infrequent event.

Although the nonattainment-transitional designations for ozone are made by operation of law, section 70303.5 of the designation criteria sets forth guidelines for the Board to use in evaluating whether an area satisfies the requirements of H&SC section 40925.5(a). Because the nonattainment-transitional designation is based on data from only one year, it can be unstable due to year-to-year changes in meteorology. To provide more stability, the guidelines in the designation criteria allow for a review of data collected during the current calendar year. If data for the current year show more than three exceedances at any monitoring location in the area, thereby ensuring that the area would not qualify as nonattainment-transitional during the next annual review, the area remains designated as nonattainment.

Colusa County (Sacramento Valley Air Basin)

Colusa County is located in the Sacramento Valley Air Basin (SVAB) and is currently designated as nonattainment for ozone. Furthermore, the County boundary coincides with the boundary of the Colusa County Air Pollution Control District. The remainder of the SVAB is also designated as nonattainment for ozone, with the exception of Butte County, which is designated as nonattainment-transitional (*Note: although Butte County is currently designated as nonattainment-transitional for ozone, the area qualifies for redesignation as nonattainment this year*).

During 2000 through 2002, ozone data are available for the Colusa-Sunrise Boulevard site. Ozone data collected during 2000 and 2001 show a number of exceedances of the State ozone standard. However, no exceedances were measured during 2002. The highest measured ozone concentration during 2002 was 0.09 ppm, and data for the year are both representative and complete. Furthermore, a review of preliminary data available for 2003 (January through October) also shows no exceedances of the State standard. Based on all the relevant data, Colusa County qualifies for redesignation as nonattainment-transitional for ozone by operation of law.

E. CARBON MONOXIDE

There are three State carbon monoxide (CO) standards: a 1-hour standard of 20 ppm, an 8-hour standard of 6.0 ppm that applies only in the Lake Tahoe Air Basin (LTAB), and an 8-hour standard of 9.0 ppm that applies in all other areas of the State. The 8-hour LTAB standard is not to be exceeded while the remaining two standards are not to be equaled or exceeded. Most areas of California are designated as attainment for the State CO standards. However, two areas, the City of Calexico in Imperial County (Salton Sea Air Basin) and Los Angeles County (South Coast Air Basin portion) are still designated as nonattainment.

The designation criteria allow the Board to designate an area of the State as nonattainment-transitional for CO if air quality data show that the State standards were violated two or fewer times at each site in the area during the latest calendar year (note that exceedances affected by highly irregular or infrequent events are not considered violations of the State standard). In addition, an evaluation of recent air quality, meteorological, and emission data must show that CO air quality in the area has either stabilized or is improving. Finally, each site in the area must be expected to reach attainment within three years.

1. Area Redesignated as Nonattainment-Transitional for CO

Los Angeles County (South Coast Air Basin Portion)

The southwestern two-thirds of Los Angeles County is located in the South Coast Air Basin (SoCAB). Currently, this area is designated as nonattainment for the State CO standards. The remainder of the SoCAB is designated as attainment.

Based on data collected during 2002, the Los Angeles County portion of the SoCAB qualifies for redesignation as nonattainment-transitional. The 1-hour State CO standard has not been exceeded anywhere in the SoCAB since 1996. The maximum 1-hour concentration in the Los Angeles County portion of the Air Basin during 2002 was 15.8 ppm, which is below the level of the State 1-hour standard.

Although the 8-hour CO standard is still exceeded occasionally, there were no exceedances during 2002 at any monitoring site in the SoCAB except Lynwood, in Los Angeles County. Historically, the Lynwood site has shown the highest CO concentrations in the SoCAB. During 2002, the highest 8-hour average CO concentration at Lynwood was 10.1 ppm. All other 8-hour averages were below the level of the applicable State 8-hour standard. Furthermore, the 2002 CO data for Lynwood are both representative and complete.

As described earlier, the nonattainment-transitional designation for pollutants other than ozone is based not only on current air quality data, but also on an evaluation of air quality and emission trends. These data must show that CO air quality in the area has either stabilized or is improving. In addition, each site in the area must be expected to reach attainment within three years. The following paragraphs summarize the analysis for the SoCAB portion of Los Angeles County.

Over the last two decades, the Lynwood site has shown substantial reductions in 8-hour average CO concentrations. The maximum 8-hour concentration during 1985 was 27.7 ppm, compared with a maximum of 10.1 ppm during 2002. This represents an overall reduction of about 63 percent. CO emission trends track the air quality trends. However, emissions show a slightly higher rate of reduction—68 percent reduction in emissions from 1985 to 2002.

As part of their 2003 South Coast Air Basin Air Quality Management Plan, the South Coast Air Quality Management District (SCAQMD) completed a simulation analysis to show attainment of the State and national CO standards. The SCAQMD projected future-year air quality using computer simulations for a 3-day fall meteorological episode. The 1-hour (19.0 ppm) and 8-hour (17.0 ppm) average CO concentrations during the October 31 through November 1, 1997, episode were the highest recorded in the SoCAB since 1996. The model's predicted 8-hour average concentration for 2002 closely matched the maximum concentration measured that year at Lynwood.

Table 2 shows the estimated carbon monoxide emission levels and predicted concentrations for 2002, 2003, 2004, and 2005. As mentioned above, the 2002 predicted 8-hour maximum concentration closely matches the maximum 8-hour concentration measured at Lynwood during 2002 (10.1 ppm). On-road CO emissions from motor vehicles are the primary contributors to high CO concentrations in the SoCAB. These emissions are projected to decrease by an average of 7 percent per year in 2003 through 2006. Total CO emissions are projected to decrease at a similar rate—approximately 6 percent per year during the same timeframe. Using a linear rollback technique, the SCAQMD predicts the maximum 8-hour CO concentration will be reduced to 9.1 ppm in 2003 and 8.4 ppm in 2004. Neither of these values exceed the State 8-hour CO standard, and therefore, show attainment within the 3-year timeframe required for the CO nonattainment-transitional designation. Furthermore, 1-hour CO concentrations are predicted to remain well below the level of the State 1-hour standard. Continued reductions in CO emissions should ensure continued maintenance of the State CO standards.

TABLE 2
Carbon Monoxide Emissions
and Predicted Maximum Concentrations for Lynwood*

Year/Scenario	CO Planning Inventory Emissions (tons/day)	8-Hour Maximum Concentration (ppm)	1-Hour Maximum Concentration (ppm)
1997 Baseline	6460	14.9	16.7
2002 Baseline	4835	9.9	10.8
2003 Predicted	4527	9.1	9.9
2004 Predicted	4278	8.4	9.2
2005 Predicted	4029	7.8	8.5

*Source: Final 2003 Air Quality Management Plan (Chapter 5: Future Air Quality); South Coast Air Quality Management District (2003).

Based on current air quality data and projected attainment within the next three years, the ARB staff proposes that the Los Angeles County portion of the South Coast Air Basin be redesignated as nonattainment-transitional for the State CO standards.

F. SULFATES

The State sulfates standard is a 24-hour average concentration of 25 $\mu\text{g}/\text{m}^3$. This concentration is not to be equaled or exceeded. In June 2002, the Board revised the measurement method for the State sulfates standard. While the level of the State sulfates standard was maintained at 25 $\mu\text{g}/\text{m}^3$, the measurement method was changed from one based on total suspended particulate matter or TSP, to one based on PM10. The revised method became effective in July 2003.

The designation criteria specify two ways in which an area may be designated as attainment for the State sulfates standard. The first way is based on measured air quality data. An area is designated as attainment if measured concentrations do not show any violation of the State sulfates standard during the most recent three calendar years. The second way is based on the *Screening Procedure for Determining Attainment Designations for Areas with Incomplete Air Quality Data* (Screening Procedure) contained in Appendix 4 to the designation criteria.

The Board adopted the Screening Procedure as a tool for use when measured air quality data are either not available or not representative and complete. The Screening Procedure applies only to nitrogen dioxide, sulfur dioxide, sulfates, and lead and provides a conservative approach for designating areas as attainment for these four pollutants. The Screening Procedure specifies several limits or screening values for each of the four pollutants. If the values for a local area are below the level of the screening values, the Board may designate the area as attainment. The screening values for sulfates are listed below:

<i>Total Annual Sulfur Oxides (SO_x) Emissions in Air Basin:</i>	<i>19,000 tons/year</i>
<i>Total Annual Point Source SO_x Emissions in County:</i>	<i>1,700 tons/year</i>
<i>Max Annual SO_x Emissions from Single Source in County:</i>	<i>900 tons/year</i>

Because of the change in the sulfates measurement method, the staff evaluated data for all areas of the State to determine if any changes in designation were appropriate. This evaluation indicated a need to redesignate one area as attainment. All other areas of the State will maintain their current area designation, based on either sulfates air quality data or the Screening Procedure.

1. Area Redesignated as Attainment for Sulfates

Searles Valley Planning Area Portion of San Bernardino County **(Mojave Desert Air Basin)**

The Searles Valley Planning Area (Searles Valley) is located in the northeastern corner of San Bernardino County and is part of the Mojave Desert Air Basin (MDAB). The Searles Valley portion of San Bernardino County is currently designated as

nonattainment for the State sulfates standard. The remainder of the MDAB is designated as attainment.

The Board designated the Searles Valley portion of San Bernardino County as nonattainment for the State sulfates standard in 1991. This designation was based on data collected during 1990. These data showed four violations of the sulfates standard (one measurement of 29 $\mu\text{g}/\text{m}^3$ and three measurements of 28 $\mu\text{g}/\text{m}^3$). The Board reaffirmed the nonattainment designation in 1996, when the Mojave Desert Air Basin and Salton Sea Air Basin were created from the former Southeast Desert Air Basin. The maximum concentration for the 1993 through 1995 review period was 50 $\mu\text{g}/\text{m}^3$. This concentration was measured at the Trona-Athol monitoring site, which replaced the Trona-Market site. At that time, analyses showed that the Trona-Athol site did not measure concentrations as high as the Trona-Market site. Therefore, the Board's Executive Officer did not identify Trona-Athol as an equivalent site. Under the designation criteria, an area may not be redesignated as attainment based on air quality data, if the site with the highest concentrations has closed or been relocated, and there is no equivalent replacement site. As a result, the Searles Valley portion of San Bernardino County has remained designated as nonattainment for the State sulfates standard.

As part of the review of the State sulfates designations, the ARB staff reevaluated the Searles Valley situation. Since no PM10 sulfates data are available for the Searles Valley portion of San Bernardino County, the ARB staff evaluated the most current emissions estimates for the area, under the provisions of the Screening Procedure. The results of this evaluation are shown below.

<i>Total Annual Sulfur Oxides (SO_x) Emissions in Air Basin:</i>	<i>3,435 tons/year</i>
<i>Total Annual Point Source SO_x Emissions in County:</i>	<i>1,234 tons/year</i>
<i>Max Annual SO_x Emissions from Single Source in County:</i>	<i>427 tons/year</i>

Comparison of these values with the screening values for sulfates indicates that the Searles Valley portion of San Bernardino County now qualifies as attainment. Therefore, the ARB staff proposes the Searles Valley portion of San Bernardino County in the MDAB be redesignated as attainment for sulfates. This area will be included with the remaining portions of the MDAB as a single attainment area for the State sulfates standard.

2. Confirmation of Sulfates Designations Based on Air Quality Data

San Francisco Bay Area Air Basin

During 2000 through 2002, PM10 sulfates data are available for 13 sites in the San Francisco Bay Area Air Basin (SFBAAB). The site with the highest measured concentrations was Fremont-Chapel Way. Data for this site are representative and

complete only for the year 2000, when the maximum 24-hour average concentration was $10 \mu\text{g}/\text{m}^3$. Under the Criteria for Determining Data Completeness in Appendix 2 to the designation criteria, an area may be designated as attainment with only one year of data if the air quality data meet certain conditions. Specifically, the data for the year must be representative and complete, and the maximum concentration (not including exceedances affected by highly irregular or infrequent events) must be less than one-half the level of the State standard. The maximum value of $10 \mu\text{g}/\text{m}^3$ measured at the Fremont-Chapel Way site is less than one-half the State sulfates standard of $25 \mu\text{g}/\text{m}^3$, even before excluding any values as highly irregular or infrequent events. Therefore, the ARB staff proposes the SFBAAB remain designated as attainment for the State sulfates standard.

San Joaquin Valley Air Basin

During 2000 through 2002, PM₁₀ sulfates data are available for 11 sites in the San Joaquin Valley Air Basin (SJVAB). The Taft College site measured the highest concentration. Similar to the previous discussion, data for the Taft College site are representative and complete only for the year 2000, and the maximum measured sulfates concentration during that year was $8 \mu\text{g}/\text{m}^3$. Since this value is less than one-half the level of the State sulfates standard, the SJVAB satisfies the requirements for attainment. As a result, the ARB staff proposes the SJVAB remain designated as attainment for the State sulfates standard.

South Central Coast Air Basin

PM₁₀ sulfates data were collected at four sites in the South Central Coast Air Basin (SCCAB) during 2000 through 2002. The maximum concentrations occurred at the Simi Valley-Cochran Street site. The highest 24-hour average sulfates value during the three-year period was $12 \mu\text{g}/\text{m}^3$, measured during the year 2000. Data for this year are both representative and complete under the requirements of the designation criteria. Furthermore, since the maximum measured concentration is less than one-half the level of the State standard, the area qualifies as attainment, based on one year of data. Therefore, the ARB staff proposes the SCCAB remain designated as attainment for the State sulfates standard.

South Coast Air Basin

During 2000 through 2002, PM₁₀ sulfates concentrations were measured at 19 sites in the South Coast Air Basin (SoCAB). The site with the highest measured concentrations was the Hawthorne site in Los Angeles County. While data were collected at Hawthorne during all three years, the sulfates data are representative and complete only for two years: 2000 and 2002. During the year 2000, the maximum 24-hour average concentration was $16 \mu\text{g}/\text{m}^3$, and during 2002, the maximum concentration was $18 \mu\text{g}/\text{m}^3$. Under the Criteria for Determining Data Completeness in Appendix 2 to the designation criteria, an area may be designated as attainment with only two years of

data if data for both years are representative and complete, and the maximum concentration (not including exceedances affected by highly irregular or infrequent events) is less than three-fourths the level of the State standard. Three-fourths the level of the State sulfates standard is $18.75 \mu\text{g}/\text{m}^3$, which becomes $19 \mu\text{g}/\text{m}^3$ when it is rounded to the precision of the State sulfates standard. Since both of the maximum values measured at the Hawthorne site are less than $19 \mu\text{g}/\text{m}^3$, the area qualifies as attainment for sulfates based on two years of data. Therefore, the ARB staff proposes the SoCAB remain designated as attainment for the State sulfates standard.

3. Confirmation of Sulfates Designations Based on Screening Procedure

The remaining areas of the State all qualify as attainment based on the Screening Procedure for sulfates set forth in Appendix 4 to the designation criteria. The screening values established in the Screening Procedure are shown in Table 3, along with the screening values for each local area (air basin). Based on these data, the ARB staff proposes these areas remain designated as attainment for the State sulfates standard.

TABLE 3
Comparison of Screening Procedure Limits
and Local Screening Values for Sulfates

SCREENING PROCEDURE LIMITS			
	Total Annual SO _x Emissions in Air Basin	Total Annual Point Source SO _x Emissions in County	Maximum Annual SO _x Emissions from Single Facility in County
	19,000 tons/year	1,700 tons/year	900 tons/year
VALUES FOR LOCAL AREAS (AIR BASINS)*			
Great Basin Valleys AB	252 tons/year	226 tons/year	123 tons/year
Lake County AB	161 tons/year	95 tons/year	14 tons/year
Lake Tahoe AB	44 tons/year	4 tons/year	4 tons/year
Mountain Counties AB	774 tons/year	387 tons/year	67 tons/year
Northeast Plateau AB	332 tons/year	47 tons/year	22 tons/year
North Central Coast AB	1007 tons/year	704 tons/year	442 tons/year
North Coast AB	821 tons/year	398 tons/year	148 tons/year
San Diego AB	2741 tons/year	358 tons/year	122 tons/year
Sacramento Valley AB	1945 tons/year	843 tons/year	216 tons/year
Salton Sea AB	434 tons/year	77 tons/year	24 tons/year
* All SO _x emissions estimates are based on the ARB 2002 Emission Inventory database (Almanac version).			

G. PARTICULATE MATTER

1. Introduction

In 1982, the Board adopted State standards for PM₁₀: a 24-hour standard of 50 $\mu\text{g}/\text{m}^3$ and an annual average standard of 30 $\mu\text{g}/\text{m}^3$. The Children's Environmental Health Protection Act (Senate Bill 25, Escutia, 1999) required review of the State PM₁₀ standards for their ability to adequately protect public health, including that of infants and children. The review also included an evaluation of PM_{2.5}. As a result of this review, the Board established in June 2002, a new State annual standard for PM_{2.5} of 12 $\mu\text{g}/\text{m}^3$ and lowered the level of the annual PM₁₀ standard to 20 $\mu\text{g}/\text{m}^3$. In addition, the ARB revised the averaging method for the State annual PM₁₀ standard from an annual geometric mean to an annual arithmetic mean. The annual arithmetic mean also applies to the State PM_{2.5} standard. These State standards became effective July 5, 2003. The Board also approved a list of PM₁₀ and PM_{2.5} samplers. These approved samplers include continuous monitors for use in determining compliance with the State PM standards.

Table 4 presents a summary of the proposed area designations for the State PM₁₀ and PM_{2.5} standards, including the proposed area designation boundaries. For each area, Table 4 lists the designation value (DV) for the relevant standard (annual PM_{2.5}, 24-hour PM₁₀, and annual PM₁₀), the proposed area designation for the State PM_{2.5} standard, the designation status for the 24-hour and annual State PM₁₀ standards, and the proposed area designation for PM₁₀. The area designation for PM₁₀ is based on the designation status for either the State 24-hour or annual standard. A nonattainment designation for either State PM₁₀ standard triggers an overall nonattainment designation for the area. Discussions of the proposed area designations for both PM₁₀ and PM_{2.5} follow the table. In addition, the procedure used in making the area designations for the new State PM_{2.5} and revised State PM₁₀ standards is included as Attachment E to this staff report.

The area designation criteria (CCR, title 17, section 70302) specify that the geographic extent of the area designated for PM₁₀ and PM_{2.5} will be an air basin. However, these criteria allow the State to consider factors such as air quality data, meteorology, topography, or the distribution of population or emissions in determining areas smaller than an air basin. In determining appropriate boundaries for the PM designated areas, the ARB staff considered geography and meteorology, the extent of urban areas, transportation corridors, the location of emission sources, and existing political jurisdictions. Where the proposed designation area is smaller than an air basin, the specific reasons are noted.

TABLE 4
2003 Proposed Area Designations for State Particulate Matter Standards¹

Air Basin	PM2.5			PM10						
	Area Included	Annual (Std = 12 µg/m ³)		Area Included	24 Hour (Std = 50 µg/m ³)		Annual (Std = 20 µg/m ³)		Proposed Designation ⁶	
		DV ²	Proposed Designation ³		DV	Status ⁴	DV	Status ⁵		
Great Basin Valleys	Entire air basin		U	Entire air basin	6505	N	139	N	N	
Lake County	Entire air basin	6	A	Entire air basin	30	A	13	A	A	
Lake Tahoe	Entire air basin		U	Entire air basin	58	N		U	N	
Mojave Desert	Central San Bernardino (portion of San Bernardino County within the federal Modified AQMA for ozone)	14	N	Entire air basin	98	N	34	N	N	
	Remainder (portions of Kern, Los Angeles, and Riverside counties within air basin)		U							
Mountain Counties	Plumas County - Portola Valley - Remainder of County	13	N U	Plumas County	73	N		U	N	
	Remainder (Amador, Calaveras, Mariposa, Nevada, Sierra, Tuolumne counties, and portions of El Dorado and Placer County within air basin)	Amador County		U			U		U	U
		Calaveras County			44	N ⁷	21	N	N	N
		El Dorado County (portion within air basin)			47	N ⁸		U	N	N
		Mariposa County - Yosemite National Park - Remainder of County			154	N U	30	N U	N U	N U

TABLE 4 (continued)
2003 Proposed Area Designations for State Particulate Matter Standards¹

Air Basin	PM2.5			PM10					
	Area Included	Annual (Std = 12 µg/m ³)		Area Included	24 Hour (Std = 50 µg/m ³)		Annual (Std = 20 µg/m ³)		Proposed Designation ⁶
		DV ²	Proposed Designation ³		DV	Status ⁴	DV	Status ⁵	
Mountain Counties (continued)				Nevada County	92 ^b	N		U	N
				Placer County (portion within air basin)	86 ¹⁰	N		U	N
				Sierra County	68 ¹¹	N		U	N
				Tuolumne County		U		U	U
North Central Coast	Entire air basin		U	Entire air basin	77	N	31	N	N
North Coast	Entire air basin		U	Entire air basin	73	N	25	N	N
Northeast Plateau	Entire air basin		U	Entire air basin	69	N		U	N
Sacramento Valley	Butte County	16	N	Entire air basin	105	N	32	N	N
	Sacramento County	13	N						
	Placer County (portion within air basin)	13	N						
	Remainder (Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba; portion of Solano within air basin)		U						
Salton Sea	Imperial County - Calexico - Remainder of County	15	N U	Entire air basin	373	N	87	N	N

**TABLE 4 (continued)
2003 Proposed Area Designations for State Particulate Matter Standards¹**

Air Basin	PM2.5			PM10					
	Area Included	Annual (Std = 12 µg/m ³)		Area Included	24 Hour (Std = 50 µg/m ³)		Annual (Std = 20 µg/m ³)		Proposed Designation ⁶
		DV ²	Proposed Designation ³		DV	Status ⁴	DV	Status ⁵	
Salton Sea (continued)	Remainder (portion of Riverside County within air basin)		U						
San Diego	Entire air basin	16	N	Entire air basin	139	N	52	N	N
San Francisco Bay Area	Entire air basin	14	N	Entire air basin	85	N	30	N	N
San Joaquin Valley	Entire air basin	24	N	Entire air basin	205	N	60	N	N
South Central Coast	Ventura County (including Anacapa and San Nicolas islands)	15	N	Entire air basin (including Anacapa, San Nicolas, San Miguel, Santa Barbara, Santa Cruz, and Santa Rosa islands)	178	N	31	N	N
	Remainder (San Luis Obispo and Santa Barbara Counties, including San Miguel, Santa Barbara, Santa Cruz, and Santa Rosa islands)		U						
South Coast	Entire air basin (including San Clemente and Santa Catalina islands)	26	N	Entire air basin (including San Clemente and Santa Catalina islands)	139	N	63	N	N

Footnotes for Table 4

1. Designation Categories: A = Attainment; N = Nonattainment; U = Unclassified
2. DV = Designation Value. The DV for the State 24-hour PM10 standard is the highest concentration during the previous three calendar years that is not excluded as a highly irregular or infrequent event. For the State annual PM10 and PM2.5 standards, the DV is the highest calculated annual average concentration during the previous three calendar years.
3. If the designation value for the annual PM2.5 standard is $12 \mu\text{g}/\text{m}^3$ or less = A; if $13 \mu\text{g}/\text{m}^3$ or greater = N
4. If the designation value for the 24-hour PM10 standard is $50 \mu\text{g}/\text{m}^3$ or less = A; if $51 \mu\text{g}/\text{m}^3$ or greater = N
5. If the designation value for the annual PM10 standard is $20 \mu\text{g}/\text{m}^3$ or less = A; if $21 \mu\text{g}/\text{m}^3$ or greater = N
6. An area is designated nonattainment if either the 24-hour or the annual PM10 standards are not attained. All State PM10 area designations remain unchanged from last year.
7. As pointed out in the 1999 review of area designations, the only monitor in Calaveras County does not represent population exposure, and therefore, the previous nonattainment status for the 24-hour PM10 standard is maintained.
8. As pointed out in the 1999 review of area designations, the only monitor in El Dorado County does not reflect or measure the impact of any PM10 sources in the area, and therefore the previous nonattainment status for the 24-hour PM10 standard is maintained.
9. Designation value for 2000; since no more recent data are available the previous nonattainment status is maintained.
10. Designation value for 1997; since no more recent data are available nonattainment status is maintained.
11. Designation value for 2000; since no more recent data are available nonattainment status is maintained

2. *Suspended Particulate Matter (PM10)*

Based on air quality data collected during 2000 through 2002, the ARB staff does not propose any changes to the existing area designations for the State PM10 standards. As shown in Table 4 and in Attachment C to this staff report, most of California remains designated as nonattainment for this pollutant. The Lake County Air Basin remains the only area of the State to attain both the 24-hour and annual PM10 standards. Thirteen air basins, six counties in the Mountain Counties Air Basin (MCAB), and the Yosemite National Park (Yosemite) area in Mariposa County do not attain the State 24-hour PM10 standard. In addition, eleven of the State's thirteen air basins, Calaveras County in the MCAB, and Yosemite also do not attain the revised State annual PM10 standard. As a result, all of the existing PM10 nonattainment areas remain designated as nonattainment.

In reviewing the area designations for PM10, ARB staff retained the existing boundaries for the PM10 attainment and nonattainment areas. The designated areas are primarily air basins, with exceptions in the MCAB, where counties and the Yosemite area comprise smaller nonattainment areas. As described in the 1989 area designation staff report (ARB, April 1989), the split of the MCAB is based on the distinct effects that possible pollutant transport from the Sacramento and San Joaquin valleys may have on the western portions of many of the MCAB counties. These effects are due in part to the topography and meteorology of the MCAB area. The Yosemite area is a distinct nonattainment area based on supplemental air quality data and unique topography and meteorology, as noted in the revision to the 1989 area designation staff report (ARB, June 1989).

3. *Fine Suspended Particulate Matter (PM2.5)*

The installation of federally-approved PM2.5 mass monitors at 81 sites throughout the State began in 1998 and was completed in 2000. Due to performance limitations in California's environment, we replaced samplers with a different brand of federally-approved monitor in 2002. As a result, the PM2.5 data available for a number of sites do not meet the representativeness and/or completeness criteria required for attainment and nonattainment designations. Consequently, many areas are designated as unclassified. However, the ARB will continue to evaluate data from sites in these areas as they become available.

As shown in Table 4 and in Attachment C to this staff report, ARB staff proposes approximately half of California be designated as nonattainment for the new State annual PM2.5 standard, with Lake County Air Basin as the only attainment area. The proposed nonattainment areas include four air basins (San Diego, San Francisco Bay Area, San Joaquin Valley, and South Coast), three additional counties (Butte, Sacramento, and Ventura), the portion of Placer County within the Sacramento Valley Air Basin, the central portion of San Bernardino County, the city of Calexico in

Imperial County, and the Portola Valley area of Plumas County. Adequate PM_{2.5} data are not yet available for the remaining areas in the State. ARB staff proposes these areas be designated as unclassified.

In proposing the area designations for PM_{2.5}, ARB staff used air basin boundaries, where appropriate. We propose smaller areas within the air basin when significant differences among the areas exist. Differences may include topography, the extent of urban areas, transportation corridors, and the location of emission sources. Proposed boundaries are based on county, district, or city boundaries, pre-existing State and federal nonattainment area boundaries for related pollutants (for example, ozone or PM₁₀), or distinct geographic features. The boundaries and justification for the proposed State PM_{2.5} area designations are described in the following sections.

Great Basin Valleys Air Basin

Limited PM_{2.5} data for the most recent three years are available from three monitors at two sites in the Great Basin Valleys Air Basin (GBVAB). Since the data do not meet the representativeness or completeness criteria, ARB staff proposes the GBVAB be designated as unclassified for the State PM_{2.5} standard.

Lake County Air Basin

PM_{2.5} data from the only monitoring site in Lake County Air Basin (LCAB) meet the representativeness and completeness criteria required for an attainment designation, with a designation value of 6 µg/m³. As a result, ARB staff proposes that LCAB be designated as attainment for the State PM_{2.5} standard.

Lake Tahoe Air Basin

The limited PM_{2.5} data available from three monitors at the two sites in the Lake Tahoe Air Basin (LTAB) do not meet either the representativeness or the completeness criteria. ARB staff therefore proposes that LTAB be designated as unclassified for the State PM_{2.5} standard.

Mojave Desert Air Basin

The Mojave Desert Air Basin (MDAB) is the largest air basin in California, comprising nearly 26,000 square miles and covering most of California's high desert. It includes portions of four counties: Kern, Los Angeles, Riverside, and San Bernardino. Only two percent of California's population lives in this air basin, mostly concentrated in the Los Angeles County portion of the MDAB and the southwestern edge of the San Bernardino County portion of the MDAB.

In the San Bernardino County portion of MDAB, total emissions of PM_{2.5} and PM_{2.5} precursors are close to four times the emissions in the Los Angeles County portion of

MDAB and more than fifteen times the emissions in the Riverside County portion of MDAB. Available PM2.5 air quality data show that the San Bernardino County portion of MDAB exceeds the State PM2.5 standard. Although PM2.5 data for the Los Angeles County portion of MDAB and the Kern County portion of MDAB do not meet the representative and completeness criteria needed to support an attainment designation, the available data indicate that on an annual average basis, PM2.5 concentrations tend to be significantly below the level of the State standard. Based on these factors, ARB staff proposes that sub-areas within the MDAB be designated as indicated below. In addition, pursuant to section 70302 of the designation criteria, ARB staff proposes that contiguous areas that would have the same designation within an air basin be one designated area.

Nonattainment Area: San Bernardino County Portion of the Federal Southeast Desert Modified AQMA

PM2.5 data are available from two monitors at one site in Victorville, which is located in the southwestern corner of the San Bernardino County portion of MDAB. These data, with a peak annual average PM2.5 concentration of $14 \mu\text{g}/\text{m}^3$, would support a nonattainment designation for the County. However, due to the concentration of emission sources in the southwestern portion of the MDAB and the nature of common precursors between ozone and PM2.5, the Mojave Desert Air Quality Management District (MDAQMD) requested that the nonattainment area for PM2.5 be limited to the portion of San Bernardino County within the federal Southeast Desert Modified Air Quality Management Area for ozone (federal ozone AQMA). The MDAQMD also provided two years of PM2.5 data the District collected for the Marine Corps Air Ground Combat Center in Twentynine Palms. The data show very low PM2.5 levels throughout the year, with annual average PM2.5 concentrations of $6 \mu\text{g}/\text{m}^3$. Twentynine Palms is located within the federal ozone AQMA, close to the southeastern boundary of this area. Therefore, we do not expect areas east of the federal ozone AQMA boundary to exceed the State PM2.5 standard. No PM2.5 data are available to indicate how far to the north the nonattainment area boundary should be drawn. However, the medium-sized city of Barstow, with two interstate highways and a total population comparable to the city of Twentynine Palms, contributes PM2.5 and PM2.5 precursor emissions to the region. Therefore, this area should be included within the nonattainment area.

Based on this information, ARB staff proposes that the portion of San Bernardino County within the federal Southeast Desert Modified AQMA for ozone be designated as nonattainment for the State PM2.5 standard. The boundaries for the proposed nonattainment area are described in the Code of Federal Regulations, Title 40, Chapter 7, Part 81, Section 81.305. Because this is a non-county area, the ARB staff proposes to include the description of the federal Southeast Desert Modified AQMA for ozone within the area designation regulations as CCR, title 17, section 60200(b).

Unclassified Areas: Remainder of the San Bernardino County Portion of the MDAB and the Kern, Los Angeles, and Riverside County Portions of the MDAB

Limited PM_{2.5} data for the last three years are available for one monitor at each of the two sites in the Kern County portion of the MDAB and one monitor at each of the two sites in the Los Angeles County portion of the MDAB. These PM_{2.5} data do not meet the representativeness or completeness criteria to support an attainment designation. Also, no monitoring data are available for the remainder of San Bernardino County within the MDAB or the Riverside County portion of MDAB. Hence, ARB staff proposes that the remainder of San Bernardino County within MDAB and the portions of Kern, Los Angeles, and Riverside counties within MDAB be designated as unclassified for the State PM_{2.5} standard.

Mountain Counties Air Basin

In designating areas for PM_{2.5} in the Mountain Counties Air Basin (MCAB), we propose retaining the same boundaries as the existing PM₁₀ areas, where counties constitute smaller designation areas. However, there are some isolated valleys with distinct microclimates, with meteorology and air quality that are not representative of an entire county. ARB staff therefore proposes that sub-areas within the MCAB be designated as indicated below. In addition, pursuant to area designation criteria in CCR, title 17, section 70302, ARB staff proposes that contiguous areas that would have the same designation within an air basin be one designated area.

Nonattainment Area: Portola Valley (Plumas County)

PM_{2.5} data were obtained from two monitors located at Portola and Quincy in Plumas County. Data available from these monitors do not meet the representativeness or completeness criteria. The Portola monitor however, was missing only a few data points. Therefore, by substituting the missing PM_{2.5} concentrations in 2001 with a concentration of 0 µg/m³, we calculated an annual PM_{2.5} concentration of 13 µg/m³ for the Portola monitor. Hence, Portola would be nonattainment. Available PM_{2.5} data from the Quincy monitor show that PM_{2.5} concentrations in Quincy are consistently lower than the concentrations in Portola, especially during winter, which is the season of peak PM_{2.5} concentrations in Plumas County. Hence, the Quincy monitor is not expected to exceed the State PM_{2.5} standard.

The Northern Sierra Air Quality Management District (NSAQMD) requested that the nonattainment area in Plumas County be limited to the city of Portola. Portola and Quincy are each located in small and isolated valleys at approximately 5,000 feet elevation that appear to be representative of microenvironments. During the winter season, wood burning in woodstoves and fireplaces contributes significantly to the high PM_{2.5} concentrations measured at Portola.

ARB staff evaluated the topography, meteorology, and population distribution in the area surrounding Portola. Portola is situated in an area comprised of the Humbug and

Mohawk Valleys that are geographically isolated from the remainder of Plumas County. However, there are a number of other communities within this area in addition to Portola, and the population within this region is growing. We refer to this entire area as the Portola Valley. Because of the additional population areas outside of Portola, the expected wood smoke contributions in these additional communities, and the growth potential of the area, we propose that the Portola Valley area in Plumas County be designated as nonattainment for the State PM2.5 standard.

In order to define the area encompassed by the Portola Valley, we further propose using hydrographic boundaries based on watersheds. A watershed boundary defines a ridge of high land that separates areas drained by different river systems. Specifically, the Portola Valley would be defined as that portion of Plumas County within the following Super Planning Watersheds (SPWS): Humbug Valley (# 55183301), Sulpher Creek (#55183302), Frazier Creek (#55183303), and Eureka Lake (#55183304). These are the SPWS as created by the California Interagency Watershed Mapping Committee and described in CalWater version 2.2, October 1999. Information about CalWater version 2.2 can be found on the web at the following address: <http://www.ca.nrcs.usda.gov/features/calwater/index.html>. Since Portola Valley is a non-county area, the ARB staff proposes to include a reference to the area boundary description in the area designation regulations as CCR, title 17, section 60200(c).

Unclassified Areas: Amador, Calaveras, Mariposa, Nevada, Sierra, and Tuolumne Counties, the El Dorado and Placer County portions of MCAB, and the Remainder of Plumas County

PM2.5 concentrations were measured at one monitor each in Calaveras, Mariposa, and the remainder of Plumas counties. In addition, there were three PM2.5 monitors at two sites in Nevada County. No PM2.5 monitors were operating in the MCAB portions of El Dorado and Placer counties or in Amador, Sierra, or Tuolumne counties. Data from the San Andreas-Gold Strike Road site in Calaveras County show annual average PM2.5 concentrations that do not exceed the State standard. However, as described in the 1999 area designation staff report (ARB 1999), the San Andreas monitoring site was originally established to measure maximum ozone concentrations, and PM data from this site do not represent the highest PM concentrations that might be expected to occur in Calaveras County. The available PM2.5 data from monitors located in the remaining counties do not meet the representativeness or completeness criteria. The ARB staff therefore proposes that Amador, Calaveras, Mariposa, Nevada, Sierra, and Tuolumne counties, the El Dorado and Placer county portions of MCAB, and the remainder of Plumas County, be designated as unclassified for the State PM2.5 standard.

North Central Coast Air Basin

The limited PM_{2.5} data available from the two monitors in the North Central Coast Air Basin (NCCAB) do not meet the representativeness or completeness criteria. As a result, the ARB staff proposes that the NCCAB be designated as unclassified for the State PM_{2.5} standard.

North Coast Air Basin

PM_{2.5} data are available from two monitors at two sites in the North Coast Air Basin (NCAB). Since these data do not meet the representativeness or completeness criteria, ARB staff proposes that the NCAB be designated as unclassified for the State PM_{2.5} standard.

Northeast Plateau Air Basin

PM_{2.5} data obtained from the one monitor in the Northeast Plateau Air Basin (NEPAB) do not meet the representativeness or completeness criteria. ARB staff therefore proposes that the NEPAB be designated unclassified for the State PM_{2.5} standard.

Sacramento Valley Air Basin

The Sacramento Valley Air Basin (SVAB) is comprised of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties, and the portions of Placer and Solano counties within the SVAB. These counties include the heavily urbanized area in the southern and eastern portions of the Valley and the rural, mostly agricultural areas in the western and northern portions of the Valley. As a result, emissions sources of PM_{2.5} and PM_{2.5} precursors and resulting PM_{2.5} concentrations vary widely among these areas. In addition, annual average PM_{2.5} concentrations are strongly influenced by high concentrations during the fall and winter. These elevated concentrations during the fall and winter include contributions from both ammonium nitrate and carbon. While ammonium nitrate is more regional in nature, carbon sources such as woodsmoke and agricultural burning can be more localized. Because of the differences in PM_{2.5} concentrations throughout the SVAB, and because the counties within the SVAB with the highest PM_{2.5} concentrations appear to have a strong contribution from more localized carbon sources, ARB staff proposes that sub-areas within the SVAB be designated on a county basis, as indicated below. In addition, pursuant to area designation criteria in CCR, title 17, section 70302, ARB staff proposes that contiguous areas that would have the same designation within an air basin be one designated area.

Nonattainment Areas:Butte County

In Butte County, PM_{2.5} concentrations were measured by four monitors at two sites. Concentrations at both sites exceeded the State annual PM_{2.5} standard, with a maximum annual PM_{2.5} concentration of 16 µg/m³ recorded at the Chico-Manzanita monitoring site. Hence, ARB staff proposes that Butte County be designated as nonattainment for the State PM_{2.5} standard.

Placer County Portion of SVAB and Sacramento County

Data available from four monitors at three sites in Sacramento County did not meet the representativeness and completeness criteria. However, by substituting missing data from 2002 with PM_{2.5} concentrations of 0 µg/m³ for one of the monitors, the calculated annual average PM_{2.5} concentration was 13 µg/m³ which is above the level of the State PM_{2.5} standard. As a result, Sacramento County would be nonattainment. PM_{2.5} data obtained from the one monitor in the Placer County portion of the SVAB show this area is nonattainment, as well, with a DV of 13 µg/m³. The ARB staff therefore proposes that Sacramento County and the SVAB portion of Placer County be designated as nonattainment for the State PM_{2.5} standard.

Unclassified Areas: Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba Counties and the Solano County Portion of SVAB

PM_{2.5} concentrations were measured at one monitor each in Colusa, Shasta, and Yolo counties and two monitors at one site in Sutter County. The available PM_{2.5} data do not meet the representativeness or completeness criteria. In addition, there are no PM_{2.5} monitors in the SVAB portion of Solano County or in Yuba County. The ARB staff therefore proposes that Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba counties and the Solano County portion of SVAB be designated as unclassified for the State PM_{2.5} standard.

Salton Sea Air Basin

The Salton Sea Air Basin (SSAB) includes two very distinct areas, the Coachella Valley in the Riverside portion of the SSAB and Imperial County, separated by the Salton Sea. Coachella Valley is an open desert area with a few medium-sized cities located in the northern and central portions of the Valley. Imperial County includes a valley with vast agricultural areas and with a few medium-sized cities in the central and the southern portions of the County. The southernmost city of Calexico, with a population of 30,000, is adjacent to the large Mexican city of Mexicali, with about one million inhabitants.

PM_{2.5} data are available from monitors in the towns of Brawley, El Centro, and Calexico. PM_{2.5} concentrations in Brawley and El Centro originate mostly from local

population activities and agricultural operations. The available data do not meet the representativeness and completeness criteria. However, they indicate that on an annual average basis, PM_{2.5} concentrations in Brawley and El Centro tend to be near, but below, the level of the State standard. In contrast, available data show that PM_{2.5} concentrations in Calexico do exceed the State standard. Furthermore, PM_{2.5} and PM_{2.5} precursor emissions generated in the neighboring Mexicali area significantly impact the PM_{2.5} concentrations measured in Calexico.

Based on these factors, we recommend that sub-areas within the SSAB be designated, as described below. However, ARB staff will reevaluate these boundaries when complete data are available for Brawley and El Centro, and data for either or both sites show PM_{2.5} concentrations exceeding the State standard.

Nonattainment Area: City of Calexico in Imperial County

PM_{2.5} data obtained from the monitoring site in Calexico show that the State standard is exceeded, with a DV of 15 µg/m³. As a result, ARB staff proposes that the city of Calexico in Imperial County be designated as nonattainment for the State PM_{2.5} standard. The ARB staff also proposes that the boundary of the city of Calexico area be consistent with the boundary used for the State CO nonattainment area contained in the area designation regulations, updated to a more current boundary. The City of Calexico boundary, as defined in the U.S. Census Bureau, Census 2000 (Place ID #09710), will be included in CCR, title 17, section 60200(a).

Unclassified Areas: Remainder of Imperial County and the Riverside County Portion of SSAB

The PM_{2.5} data available from the monitors at Brawley and El Centro in Imperial County, and from three monitors at two sites in the Riverside County portion of the SSAB, do not meet the representativeness or completeness criteria. Therefore, ARB staff proposes that the remainder of Imperial County and the Riverside County portion of SSAB be designated as unclassified for the State PM_{2.5} standard.

San Diego County Air Basin

Five monitors measured PM_{2.5} concentrations at five sites in San Diego County. Available data show that the State PM_{2.5} standard was exceeded at two sites in the County, with the highest annual average PM_{2.5} concentration of 16 µg/m³ recorded at the San Diego-12th Avenue site. Although data for the other sites do not meet the representativeness or completeness criteria, available data consistently show annual average PM_{2.5} concentrations above the level of the State standard. Hence, the ARB staff proposes that San Diego County Air Basin be designated as nonattainment for the State PM_{2.5} standard.

San Francisco Bay Area Air Basin

PM2.5 concentration data are available from fourteen monitors at thirteen sites located throughout the San Francisco Bay Area Air Basin (SFBAAB). These PM2.5 data show that the State annual PM2.5 standard was exceeded at three sites, with a DV of $14 \mu\text{g}/\text{m}^3$ recorded at the Livermore monitoring site. Although data for the remaining sites do not meet the representativeness or completeness criteria, the annual average PM2.5 concentrations at multiple sites are consistently above the level of the State standard. As a result, ARB staff proposes the SFBAAB be designated as nonattainment for the State PM2.5 standard.

San Joaquin Valley Air Basin

During the last three years, nineteen monitors at eleven sites in the San Joaquin Valley Air Basin (SJVAB) measured PM2.5 concentrations. Available data show that the State annual PM2.5 standard was exceeded at nine sites located throughout most of the Valley, with the peak annual average concentration of $24 \mu\text{g}/\text{m}^3$ recorded at the Bakersfield-5558 California Avenue site. Although data for the other two sites do not meet the representativeness or completeness criteria, the available data consistently show annual average PM2.5 concentrations above the level of the State standard. ARB staff therefore proposes that the SJVAB be designated as nonattainment for the State PM2.5 standard.

South Central Coast Air Basin

The South Central Coast Air Basin (SCCAB) includes, from north to south, San Luis Obispo, Santa Barbara, and Ventura counties. The Los Padres National Forest separates Ventura County from Santa Barbara County. Urban areas in Ventura County are concentrated in the southern portion of the County, in both coastal and inland valley areas. Most of the population in Santa Barbara and San Luis Obispo counties resides in the coastal areas. Although the sea breeze ventilates the coastal areas of all three counties, meteorology differs among the three areas.

High PM2.5 concentrations have been recorded in the inland valleys of Ventura County. In contrast, low PM2.5 concentrations were recorded in San Luis Obispo and in northern Santa Barbara counties. Data for the city of Santa Barbara are insufficient to determine if the area is nonattainment for the State PM2.5 standard. Based on these factors, ARB staff proposes that sub-areas within the SCCAB be designated on a county basis, as described below. In addition, pursuant to section 70302 of the designation criteria, ARB staff recommends that contiguous areas having the same designation within the air basin be one designated area.

Nonattainment Area: Ventura County

PM2.5 monitoring data were obtained from five monitors at four sites in Ventura County. Data from one of the monitoring sites show that concentrations in the County

exceeded the State annual PM2.5 standard. Although data for the remaining sites do not meet the representativeness or completeness criteria, annual average concentrations for two of these sites are consistently above the level of the State standard. ARB staff therefore proposes that Ventura County be designated as nonattainment for the State PM2.5 standard.

Unclassified Areas: Santa Barbara and San Luis Obispo Counties

PM2.5 data are available from two monitors at two sites in Santa Barbara County and three monitors at two sites in San Luis Obispo County. Since these PM2.5 data do not meet the representativeness or completeness criteria, ARB staff proposes that Santa Barbara and San Luis Obispo counties be designated as unclassified for the State PM2.5 standard.

South Coast Air Basin

Twenty-two monitors measured PM2.5 concentrations at seventeen sites in the South Coast Air Basin (SoCAB). Data from twelve sites located throughout the SoCAB show exceedances of the State standard, with the peak annual PM2.5 concentration of 26 $\mu\text{g}/\text{m}^3$ recorded at the San Bernardino-4th Street site. Although data from the rest of the sites do not meet the representativeness or completeness criteria, annual average PM2.5 concentrations at four of these sites are consistently above the level of the State standard. Hence, ARB staff proposes that the SoCAB be designated as nonattainment for the State PM2.5 standard.

H. AREAS NOT RECOMMENDED FOR REDESIGNATION

Sometimes, air quality data for an area will appear to signal a change in area designation, but further evaluation indicates that a change is not warranted. This year, two areas fall into this category, and the rationale for not changing their area designation status is described below.

1. Glenn County for Ozone

Glenn County is located in the Sacramento Valley Air Basin (SVAB) and is currently designated as nonattainment-transitional for the State ozone standard. Most of the remaining portions of the SVAB are currently designated as nonattainment, with the exception of Butte County, which is currently designated as nonattainment-transitional. *(Although these are the current designations, the ARB staff is proposing that Butte County be redesignated as nonattainment and Colusa County be redesignated as nonattainment-transitional for ozone.)*

During 2000 through 2002, ozone data were collected at the Willows-East Laurel Street site in Glenn County. This site represents an area of high concentrations, and the data collected are both representative and complete for all three years. During the three-year period, the highest measured ozone concentration was 0.09 ppm. This is

also the designation value for Glenn County, and it does not exceed the State ozone standard.

Based on the measured ozone data, it would appear that Glenn County qualifies for redesignation as attainment. However, the designation criteria require that when an area smaller than an air basin is designated as attainment, the area be unique in terms of air quality. Specifically, the designation criteria require that the smaller area have distinctly different air quality, deriving from sources and conditions not affecting the entire air basin. The ARB staff must base this finding on air quality data, meteorology, topography, or the distribution of population and emissions.

Glenn County comprises a mostly rural area, with sparse population and few emission sources. However, the County is part of the larger Sacramento Valley area. There are few barriers to the movement of air parcels in this part of the Valley, and the various counties are more similar in terms of air quality than they are unique. In addition, the Interstate 5 corridor transects the Valley, further tying the areas together.

Based on these factors, the ARB staff does not find that Glenn County has air quality unique from other areas of the SVAB and does not propose that Glenn County be redesignated as attainment for the State ozone standard. Since the County did not have any exceedances of the State standard during 2002, the ARB staff proposes the area retain its current nonattainment-transitional designation.

2. Lake County Air Basin for Visibility Reducing Particles

Lake County Air Basin (LCAB) is comprised of Lake County and is located in the northern portion of California. The area is currently designated as attainment for the State visibility reducing particles (VRP) standard.

The State VRP standard applicable in the LCAB is expressed as an 8-hour average of 0.23 extinction coefficient per kilometer due to particles, when relative humidity is less than 70 percent. The extinction coefficient is the natural logarithm of the fractional transmission of a beam of light per kilometer through an air mass and is nominally equal to a visibility of 10 miles due to particles when relative humidity is less than 70 percent. The State VRP standard is not to be exceeded. Currently, no VRP data consistent with the measurement method specified in the State VRP standard are available for LCAB. However, the area does have measurements of light scatter (B_{scat}) and coefficient of haze (COH), which can be combined and used as a surrogate for VRP. The surrogate values tend to be biased high in comparison to values measured according to the method specified in the State VRP standard. Therefore, the surrogate values can be used for determining attainment because they represent a "worst case" scenario. Conversely, because they are biased high, the surrogate values are not appropriate for determining nonattainment.

Both B_{scat} and COH data are available for a site in Lakeport during 2000 through 2002, and these data are both representative and complete for all three years. The surrogate

values show no exceedances of the State VRP standard during 2000 and 2001. However, the data show seven exceedances during 2002, with values ranging from 0.29 to 0.68. These values all occurred during August 2002 (one on August 4 and the remainder on August 14 through 19). Forest fires in the surrounding areas during this same timeframe may have impacted the values.

Based on these exceedances, it may appear that LCAB no longer qualifies as attainment for the State VRP standard. However, the EPDC for the three-year period is 0.25, and therefore, all of the high values are excluded as extreme concentration events. The highest remaining value is 0.23, which is below the level of the State VRP standard. Therefore, the ARB staff does not propose any change to Lake County Air Basin's current attainment designation for the State VRP standard.

CHAPTER V

ALTERNATIVES TO THE PROPOSED AMENDMENTS

State law (H&SC section 39607(e)) requires the Board to establish and periodically review criteria for designating areas as attainment, nonattainment, or unclassified for the State standards. In developing and revising the designation criteria, section 39607(e) also requires the Board to consider instances where there are poor or limited ambient air quality data and to consider highly irregular or infrequent violations. The designation criteria are set forth in CCR, title 17, sections 70300 through 70306 and Appendices 1 through 4, thereof. The proposed amendments to the designation criteria are consistent with the legal requirements. Chapter III of this staff report describes the proposed amendments, along with a discussion of the need and justification for the proposal. The staff has considered alternatives to the proposed amendments (namely, the no action alternative), and has found none more suitable than those proposed. The proposed amendments are necessary to ensure the continued relevance of the designation criteria and its applicability to current State standards.

The requirement for annually reviewing the area designations is also specified in State law (H&SC section 39608(c)). The proposed amendments to the area designations are described in Chapter IV of this staff report. The proposed area designations reflect the application of the designation criteria set forth in CCR, title 17, sections 70300 through 70306 and Appendices 1 through 4, thereof, as they are proposed to be amended in Chapter III of this staff report. Each proposed area designation is accompanied by a discussion of its basis and justification. The staff has considered the potential alternatives to the proposed amendments (namely, the no action alternative). However, based on the available data, the staff finds the proposed amendments are more appropriate than the no action alternative. The no action alternative would not be consistent with State law. In addition, the no action alternative would not inform the public about the healthfulness of air quality based on the most recent data.

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CHAPTER VI

IMPACTS OF THE PROPOSED AMENDMENTS

A. ECONOMIC IMPACTS

The staff does not expect the proposed amendments to have any adverse impacts on California employment, business status, or competitiveness.

1. Legal Requirement

The Government Code requires State agencies proposing to adopt or amend any administrative regulation to assess the potential for adverse economic impact on California business enterprises and individuals. The assessment shall include consideration of the impact of the proposed regulatory amendments on California jobs, business expansion, elimination, or creation, and the ability of California businesses to compete in other states.

State agencies are also required to estimate the cost or savings to any State or local agency and school district in accordance with instructions adopted by the Department of Finance. This estimate is to include non-discretionary costs or savings to local agencies and the costs or savings in federal funding to the State.

2. Potential Impact on Businesses, Business Competitiveness, Employment, and Business Creation, Elimination, or Expansion

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed amendments are presented below.

The proposed amendments to the designation criteria and area designation regulations do not contain any requirements for action. Subsequent requirements for action may result after additional steps, such as plan preparation and approval, are taken. The designation criteria provide the basis for determining the appropriate area designations for State standards, and the area designations are simply labels that describe the healthfulness of the air quality in each area. Because these regulations by themselves contain no requirements for action, they have no direct economic impact, and the following general determinations are appropriate.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer also has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will not affect small businesses because the proposed regulatory action does not contain any requirements for action.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

3. *Potential Cost to Local and State Agencies*

Similar to the previous discussion, neither the designation criteria nor the area designations contain any requirements for action, and these regulations have no direct economic impact. Therefore, pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state under Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary savings to state or local agencies.

Before taking final action on the proposed amendments to the regulations, the Board must determine that no alternative considered by the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

CHAPTER VII

ENVIRONMENTAL IMPACTS AND ENVIRONMENTAL JUSTICE

A. INTRODUCTION

The intent of the proposed regulatory actions is to provide a process and use that process to identify areas with unhealthy ambient air quality. Adopting the proposed amendments to the designation criteria and the area designations will not result in any direct impact on public health or the environment because the regulations do not contain any requirements for action. However, because State law specifies certain requirements based on an area's designation status, there may be indirect benefits, based on the area designations.

B. AIR QUALITY AND ENVIRONMENTAL BENEFITS

The designation criteria simply set forth a procedure for the Board to use in designating areas for the State standards. Because the designation criteria do not contain any requirements for action, they will not result in any air quality or environmental benefits.

Similar to the designation criteria, the area designations do not contain any requirements for action. However, in contrast to the criteria, the area designations do label areas with respect to the healthfulness of their air quality. Based on these labels, certain planning requirements may come into play, thereby providing some indirect benefits to air quality and the environment.

The proposed amendments to the area designations would change the State ozone designations for five areas, the CO designation for one area, and the sulfates designation for one area. Under State law, there are specific planning requirements for areas designated as nonattainment or nonattainment-transitional for ozone and CO. Furthermore, areas designated as attainment are required to adopt and implement rules and regulations necessary to maintain attainment status. Although there are currently no specific planning requirements for the State sulfates standard, under State law, areas are required to adopt rules and regulations sufficient for attaining all State standards as soon as practicable. Therefore, the proposed changes in area designations will indirectly result in air quality and environmental benefits, as districts adopt rules and regulations aimed at attaining the State standards.

This year is the first time the Board is making area designations for the new State PM2.5 standard. Areas will be designated as attainment, nonattainment, or unclassified for PM2.5, indicating which areas have healthful PM2.5 air quality, which areas do not meet the State PM2.5 standard, and which areas lack data with respect to the State PM2.5 standard. Recent legislation applicable to areas designated as nonattainment for PM10 or PM2.5 will require the adoption and implementation of emission control measures over the next several years. However, all areas being

proposed as PM2.5 nonattainment areas are already designated as nonattainment for the State PM10 standards. As a result, these areas are already subject to the control requirements, and the proposed PM2.5 designations are not expected to result in any additional requirements. However, the proposed PM2.5 designations will allow an area to more effectively focus its PM control strategy. These control requirements will result in air quality and environmental benefits.

C. ENVIRONMENTAL JUSTICE

The Board is committed to evaluating community impacts of proposed regulations, including environmental justice concerns. Because some communities experience higher exposures to air pollutants, it is a priority of the Board to ensure that full protection is afforded to all Californians. The proposed amendments to the designation criteria and the area designations do not contain any requirements for action. However, the area designations are designed to identify areas with unhealthy air quality, based on the most recently available data.

Based on an area's designation category, there may be specific planning requirements for improving the level of air quality. These requirements will result in reduced emissions for all nonattainment communities throughout the State. Furthermore, although State law does not impose any specific planning requirements upon districts with areas designated as attainment or unclassified, State law does require districts and the Board to make a coordinated effort to protect and enhance the ambient air quality (H&SC sections 39001 through 39003). As part of this effort, the districts must adopt rules and regulations sufficiently effective to achieve and maintain the State standards (H&SC sections 40001 and 41500). These requirements will result in improved air quality in communities throughout the State, with associated lower potential health risks.

ATTACHMENT A

***PROPOSED AMENDMENTS TO THE
AREA DESIGNATION CRITERIA***

**TEXT OF STAFF'S PROPOSED CHANGES TO
THE AREA DESIGNATION CRITERIA**

**CALIFORNIA CODE OF REGULATIONS, TITLE 17,
SECTIONS 70300 THROUGH 70306, AND APPENDICES 1 THROUGH 4, THEREOF**
(Deletions are indicated as ~~Strikeout~~ and Additions are indicated as *Underlined Italics*)

70300. General Statement of Purpose

The objective of these criteria is to guide the state board in making designations of areas as attainment, nonattainment, nonattainment-transitional, or unclassified for each of the pollutants for which state ambient air quality standards have been established in Section 70200.

NOTE: Authority Cited: sections 39600, 39601, 39607, 39608, and 40925.5, Health and Safety Code. Reference: sections 39607, 39608, and 40925.5, Health and Safety Code.

70301. Air Quality Data Used for Designations

(a) Except as otherwise provided in this article, designations shall be based on "data for record."

(1) Data for record are those data collected by or under the auspices of the state board or the districts for the purpose of measuring ambient air quality, and which the executive officer has determined comply with the siting and quality assurance procedures established in Part 58, Title 40, Code of Federal Regulations, as they existed on July 1, 1987, or other equivalent procedures.

(2) Any other data which are provided by a district or by any other person will be data for record if the executive officer determines within 90 days of submittal of complete supporting documentation that the data comply with the siting and quality assurance procedures established in Part 58, Title 40, Code of Federal Regulations, as they existed on July 1, 1987, or other equivalent procedures. If the executive officer finds there is good cause that 90 days is insufficient time to make a determination, he/she may after notification of the person requesting the data review extend the deadline for completion of the data review.

(b) Except as otherwise provided in this article, designations and reviews of designations will be based on data for record for the three calendar years prior to the year in which the designation is made or the annual review of the designation is conducted.

(c) Data as described in section 70301(a)(1) and (2) become data for record upon completion of the executive officer's review.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

70302. Geographic Extent of Designations

(a) An air basin will be the area designated for ozone, nitrogen dioxide, suspended particulate matter (PM10), *fine suspended particulate matter (PM2.5)*, sulfates, and visibility reducing particles. Provided, however, if the state board finds (based on air quality data, meteorology, topography, or the distribution of population and emissions) that there are areas within an air basin with distinctly different air quality deriving from sources and conditions not affecting the entire air basin, the state board may designate an area smaller than an air basin using political boundary lines to the extent practicable. In designating an area smaller than an air basin as nonattainment, the state board will include within the area those sources whose emissions contribute to a violation of a *state* standard for that pollutant. Contiguous areas which would have the same designation within an air basin will be one designated area.

(b) A county or the portion of a county which is located within an air basin will be the area designated for carbon monoxide, sulfur dioxide, lead (particulate), and hydrogen sulfide. Provided, however, if the state board finds (based on air quality data, meteorology, topography, or the distribution of population and emissions) that there are areas within the county with distinctly different air quality, it may designate a smaller area. In designating an area smaller than a county as nonattainment, the state board will include within the area those sources whose emissions contribute to a violation of a *state* standard for that pollutant.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 38608, Health and Safety Code.

70303. Criteria for Designating an Area as Nonattainment

(a) The state board will designate an area as nonattainment for a pollutant if:

(1) Data for record show at least one violation of a state standard for that pollutant in the area, and the measurement of the violation meets the representativeness criteria set forth in "Criteria for Determining Data Representativeness" contained in Appendix 1 to this article; or

(2) Limited or no air quality data were collected in the area, but the state board finds, based on meteorology, topography, and air quality data for an adjacent nonattainment area, that there has been at least one violation of a state standard for that pollutant in the area being designated.

(b) An area will not be designated as nonattainment if the only recorded exceedance(s) of that state standard were based solely on data for record determined to be affected by a highly irregular or infrequent event. Data affected by a highly irregular or infrequent event will be identified as such by the executive officer in accordance with the "Air Resources Board Procedure for Reviewing Air Quality Data Possibly Affected by a Highly Irregular or Infrequent Event," set forth in Appendix 2 to this article.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607, and 39608, Health and Safety Code.

70303.1. Criteria for Designating an Area as Nonattainment-Transitional for Pollutants Other than Ozone

(a) Nonattainment-transitional is a subcategory of the nonattainment designation. The state board will, if requested by a district no later than May 1 of each year pursuant to section 70306, identify that portion of a designated area within the district as nonattainment-transitional for a pollutant other than ozone with a state standard averaging time less than or equal to 24 hours and for which samples are routinely collected every day if it finds that:

(1) Data for record for the previous calendar year are consistent with the criteria established in section 70304(a)(2) and show two or fewer days at each site in the area with violations of a state standard for that pollutant (not including exceedances found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article);

(2) Evaluation of multi-year air quality, meteorological and emission data indicates that ambient air quality either has stabilized or is improving and that every site in the area is expected to reach attainment within three years; and

(3) The geographic extent of the area is consistent with the criteria established in section 70302.

(b) An area designated as nonattainment-transitional for a pollutant is close to attaining the state standard(s) for that pollutant. The nonattainment-transitional designation provides an opportunity for a district to review and potentially to modify its attainment plan. Any modification to an attainment plan must be consistent with state and federal regulations and statutes.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

70303.5. Requirements for Ozone Nonattainment-Transitional

(a) If an area within an air basin is designated as nonattainment for ozone, that area is designated as nonattainment-transitional for ozone if the following conditions are met:

(1) The area is an entire district within an air basin, or the area is a the entire portion of a district within an air basin consistent with the criteria established in section 70302(a);

(2) Data for record consistent with the criteria established in section 70304(a)(2) are used to determine the number of exceedances for the previous calendar year at each monitoring location in the area;

(3) All data collected during the previous calendar year are considered in the evaluation, including data possibly affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article;

(4) Each day with concentration(s) that exceed the state ozone standard is counted as one exceedance day; and

(5) No monitoring location in the area has more than three exceedance days during the previous calendar year.

(b) If an area qualifies for designation as nonattainment-transitional for ozone for the previous calendar year under section 70303.5(a), and the executive officer has determined that data for the current calendar year indicate more than three exceedance days at any one monitoring location, that area is designated as nonattainment.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 40925.5, Health and Safety Code. Reference: sections 39607 and 40925.5, Health and Safety Code.

70304. Criteria for Designating an Area as Attainment

(a) The state board will designate an area as attainment for a pollutant if:

(1) Data for record show that no state standard for that pollutant was violated at any site in the area; and

(2) Data for record meet representativeness and completeness criteria for a location at which the pollutant concentrations are expected to be high based on the spatial distribution of emission sources in the area and the relationship of emissions to air quality. Data representativeness criteria are set forth in "Criteria for Determining Data Representativeness" contained in Appendix 1 to this article. Data completeness criteria are set forth in "Criteria for Determining Data Completeness" contained in Appendix 3 to this article.

(b) Where there are limited or no air quality data for an area, the state board will designate the area as attainment for a pollutant if it finds that no state standard for that pollutant has been violated in that area based on:

(1) Air quality data collected in the area during the most recent period since 1980 which meet the conditions in (a) above;

(2) Emissions of that pollutant or its precursors in the area have not increased since that period to a level at which the state standard might be exceeded; and

(3) Air quality data collected in the area since the time period in (1) above do not show a violation of the state standard.

(c) Where an area has limited or no air quality data for nitrogen dioxide, sulfur dioxide, sulfates, and lead (particulate), the state board shall designate that area attainment for a pollutant if it finds that no state standard for that pollutant has been violated in that area based on the "Screening Procedure for Determining Attainment Designations for Areas with Incomplete Air Quality Data" set forth in Appendix 4 to this article.

- (d) A nonattainment area will not be redesignated as attainment for a pollutant if:
- (1) Data for record for the monitoring site showing the greatest violation of a state standard for that pollutant no longer are available; and
 - (2) No other site has been identified as equivalent by the executive officer.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

70305. Criteria for Designating an Area as Unclassified

The state board will designate an area as unclassified for a pollutant if it finds that, except as otherwise provided in this article, the data do not support a designation of attainment or nonattainment.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

70306. Annual Review of Designations

- (a) The executive officer will conduct annual reviews of all designations and will propose revisions to the designations as necessary to the state board. The executive officer will complete the annual reviews by November 15.
- (b) Any request for a change in a designation and any submittal of information for purposes of the executive officer's consideration in the annual review of a designation shall be provided in writing to the executive officer no later than May 1 of each year.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

APPENDIX 1

CRITERIA FOR DETERMINING DATA REPRESENTATIVENESS

This Appendix describes the criteria to be used in determining the data representativeness of individual air quality measurements and statistics for the purpose of designating areas as described in this Article. Data Representativeness, as that term is used herein, is only related to the determination of whether or not the amount of data reported reflected in an individual air quality measurement or statistic is sufficiently complete to characterize reliably air quality during the respective averaging time of a state standard period. No other kind of representativeness is implied. The criteria for determining data representativeness are summarized in the accompanying table and discussed further, below.

Air quality measurements and statistics are usually computed from short term observed values. For example, an annual arithmetic mean is computed from all available hourly samples. If all the short term values for the statistical time period are available, the calculated statistic is representative. However, because all the short term values for a given period often are not available, a minimum number of observations are needed to provide reasonable assurance that the calculated measurement or statistic value is a reliable estimate for the averaging time specified in the state standard.

In general, air quality measurements and statistics are considered representative if a minimum of 75 percent of all the possible potential short term values are included and are distributed throughout the entire statistical time period. This 75 percent criteria must be met from the averaging time of the initial measurement, up to and including, the final averaging time reflected by the air quality measurement or statistic. For example, a maximum daily statistic must meet the representativeness criteria specified for a "Day." Because a daily statistic reflects a single day, it does not need to meet the representativeness criteria for any other level (Month, Quarter, or Year). In evaluating data representativeness, all measurements are considered, including those identified as affected by a highly irregular or infrequent event under the "Air Resources Board Procedure for Reviewing Air Quality Data Possibly Affected by a Highly Irregular or Infrequent Event," set forth in Appendix 2 to this article.

Individual air quality measurements and statistics used for designating an area as attainment, nonattainment-transitional, or nonattainment must be representative. Furthermore, to ensure that the the group of air quality measurements or statistics used for designating an area as attainment or nonattainment-transitional reflect the time of day and the season of expected high concentrations, these data must also be complete under the "Criteria for Determining Data Completeness" set forth in Appendix 3 to this article. In contrast, the air quality measurements or statistics used for designating an area as nonattainment are not required to be complete.

~~To ensure that seasonal variations are accounted for, representative annual statistics are required to have four representative calendar quarters of data. Because three representative months are required for each calendar quarter, the lack of representativeness of the monthly mean concentrations precludes a reliable estimate of a representative calendar quarter, which in turn precludes the representativeness of an annual statistic. Each level of criteria—hour, day, month, quarter, and year—must be met in order to make a representative annual statistic.~~

~~For observations made at less than 24-hour intervals, for example, hourly samples, representativeness depends on whether all the individual values are to be used or only a single daily value is to be used. In general, for representative statistics computed from all of the individual values, such as the mean of all hours, 75 percent of the values in the respective period are required. For representative statistics computed from daily values, such as the monthly mean of daily maximum hours, data from 75 percent of the days in the month are required and the data within those days must meet the relevant representativeness criteria.~~

CRITERIA FOR REPRESENTATIVENESS OF AIR QUALITY MEASUREMENTS AND STATISTICS

<u>Representative Calendar Statistic</u>	<u>Sampling Time Period</u>	<u>Basis of Statistic or Requirement</u>	<u>Number of Representative Periods Required</u>
Year	Any		4 representative calendar quarters
Quarter	24-hour	Based on a daily sample	3 representative months
	< 24-hours <	Based on a daily statistic; or	69 or more representative calendar days
	< 24-hours <	Based on hourly samples	1,643 or more hours
Month	24-hour	Based on <u>daily infrequent sampling (1-in-6 day, 1-in-3 day, 1-in-2 day)</u>	<u>4 or more 24-hour samples 75% of all potential samples</u>
	< 24-hours <	Based on a daily statistic; or	23 or more representative calendar days
	< 24-hours <	Based on all hourly samples; or	548 or more hours
	< 24-hours <	Based on all 2-hour samples; or	274 or more 2-hour samples
	< 24-hours <	Based on all 3-hour samples	183 or more 3-hour samples
Day	1-hour		6 or more hours in each 1/3 day (hours 0 thru 7, 8 thru 15, 16 thru 23), & missing no more than 2 consecutive hourly samples
	< 2-hour	Based on all 2-hour samples	9 or more samples
	< 3-hour	Based on <u>all</u> 3-hour samples	6 or more samples
	< 24-hour	Based on daily sample	22 but not more than 26 hours of sampling

	<u>N</u>	<u>Number of Samples Needed</u>
Mean of N Hour Period	24	18 or more hourly samples
	8	6 or more hourly samples
	6	5 or more hourly samples
	4	3 hourly samples
	3	3 hourly samples
	2	2 hourly samples
	1	30 minutes or more of sampling

APPENDIX 2

AIR RESOURCES BOARD PROCEDURE FOR REVIEWING AIR QUALITY DATA POSSIBLY AFFECTED BY A HIGHLY IRREGULAR OR INFREQUENT EVENT

This Appendix describes the procedures that the Air Resources Board will use for reviewing air quality data possibly affected by a highly irregular or infrequent event with regard to the state ambient air quality standards. All decisions regarding the identification of data as being affected by a highly irregular or infrequent event will be made by the executive officer.

The executive officer will review air quality data for possible identification as affected by a highly irregular or infrequent event if the data are the only exceedances of an state ambient air quality standard in the area or if such identification would otherwise affect the designation of the area.

Three types of highly irregular or infrequent events may be identified:

1. Extreme Concentration Event.
2. Exceptional Event.
3. Unusual Concentration Event.

Extreme Concentration Events

An extreme concentration event is an event beyond reasonable regulatory control which causes an exceedance of a state standard. An extreme concentration event is based on a statistical procedure and may not always be linked to a specific identifiable cause. The causes of an extreme concentration event include but are not limited to unusual meteorology.

The steps for identifying an extreme concentration event are:

1. A district (or the executive officer) identifies questionable data.
2. In evaluating a possible extreme concentration event, the executive officer will use the data for the site at which the event is suspected to determine a limit for concentrations expected to recur no more frequently than once in one year. The limit will be determined using the "exponential tail method" described in Procedure for Computing the Values Used in Identifying Extreme Concentration Events (August 1998), which is incorporated by reference herein.

Using conventional rounding procedures, the limit will be consistent with the level of precision in which the state standard is expressed. If the possible extreme concentration exceeds the concentration expected to recur no more frequently than once in one year, the executive officer will consult with the district in identifying the data as affected by an extreme concentration event.

3. When an extreme concentration event is identified, the executive officer will review other information, including but not limited to meteorological data, to determine whether air quality data for other sites in the area were affected by the extreme concentration event.

Exceptional Events

An exceptional event is an event beyond reasonable regulatory control which causes an exceedance of a state standard. An exceptional event must be linked to a specific cause such as an act of nature or unusual human activity. As guidance to the states for determining exceptional events, the federal Environmental Protection Agency (EPA) has published Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events, (EPA-450/4-86-007), July 1986 (the EPA Guideline). The EPA Guideline provides overall criteria for determining whether an event is exceptional with regard to the national standards. The executive officer will use the EPA Guideline as a general basis for reviewing ambient data, but will not be bound by the specific definitions in the EPA Guideline for the various types of exceptional events because those definitions are made on a national basis. In addition, since what may be exceptional in one part of the state may be common in another, each possible event will be evaluated on a case-by-case basis.

The steps for identifying an exceptional event are:

1. A district (or the executive officer) identifies questionable data.
2. If a known exceptional event has occurred, the district gathers relevant data to document the occurrence.
3. If an exceptional event is only suspected, the district investigates available data for the possible event.
4. The district submits to the executive officer a request for identifying the data as affected by an exceptional event and also provides supporting documentation.

5. If the executive officer concurs with the district, he/she will identify the data as affected by an exceptional event.
6. If the district's request for identifying data as affected by an exceptional event cannot be supported, the district will be notified of the reasons. The executive officer will consider any additional data to support the request, but in the absence of any new evidence, will disapprove the request.

Unusual Concentration Events

An unusual concentration event is an event which causes an anomalous exceedance of a state standard and which does not qualify as an extreme concentration event or an exceptional event. An exceedance affected by an unusual concentration event may be identified only for an area designated as attainment or unclassified at the time of the exceedance.

The steps for identifying an unusual concentration event are:

1. A district (or the executive officer) identifies a questionable exceedance(s).
2. If the exceedance(s) has not been identified as having been affected by an extreme concentration event or an exceptional event, and if the area was designated as attainment or unclassified at the time of the exceedance(s), the executive officer will review the exceedance(s) to determine whether it was affected by an unusual concentration event.
3. In evaluating a possible unusual concentration event, the executive officer will consider all relevant information, including but not limited to the amount and characteristics of air quality data, emission data, meteorological data, potential public health and welfare impacts, and any applicable state, district, and federal rules and regulations. To identify the exceedance(s) as affected by an unusual concentration event, the executive officer must find, based on the relevant information, that the impact of the exceedance(s) is limited to the local area, the exceedance(s) is not expected to recur, and that the data do not support a nonattainment designation.

4. If the exceedance(s) qualifies as possibly affected by an unusual concentration event, the executive officer will consult with the district in identifying the exceedance(s) as affected by an unusual concentration event.
5. An area may retain its attainment or unclassified designation based on the identification and exclusion of an exceedance(s) affected by an unusual concentration event for no more than three consecutive years. If the executive officer identifies an exceedance(s) affected by an unusual concentration event in the area in the fourth consecutive year, the area will be redesignated as nonattainment.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

APPENDIX 3

CRITERIA FOR DETERMINING DATA COMPLETENESS

This Appendix describes the criteria to be used in determining data completeness for the purpose of designating areas as attainment or nonattainment transitional as described in this Article. These Criteria for Determining Data Completeness (Completeness Criteria) apply only to air quality data used in designating an area as attainment or nonattainment-transitional. Air quality data used in designating an area as nonattainment do not need to be complete. The purpose of these data eCompleteness eCriteria is to specify the minimum amount of data deemed necessary to asensure that sampling occurred at times when a violation is most likely to occur.

After a set or group of air quality measurements or statistics are deemed representative under the Criteria for Determining Data Representativeness set forth in Appendix 1 to this article, they are then evaluated under these Completeness Criteria to ensure that the group of representative measurements or statistics reflect the time of day and the season of the year during which high concentrations are likely to occur.

Complete Data

Data for a site will be complete if there are representative data (as determined in accordance with the Representativeness Criteria in Appendix 1 to this article) during the required hours (see below) of the day during the required months (see below) for the required years (see below).

Required Hours

The hours of potentially high concentration must be included. Unless a detailed evaluation determines different hours to be appropriate for a specific site, these hours are:

<u>Pollutant</u>	<u>Hours (PST)</u>
Ozone	9 am - 5 pm
Carbon Monoxide	3 pm - 9 am (next day)
Nitrogen Dioxide	8 am - 8 pm
Visibility Reducing Particles	10 am - 6 pm
Other Pollutants	Throughout day

Required Months

The months of potentially high concentrations must be included. Unless a detailed evaluation determines different months to be appropriate for a specific site, these months are:

<u>Pollutant</u>	<u>Months</u>
Ozone	July - September
Carbon Monoxide	January, November - December
Nitrogen Dioxide	October - December
Sulfur Dioxide	September - December
Sulfates	January, June - December
Lead (Particulate)	January, November - December
Other Pollutants	January - December

Required Years for an Attainment Designation

The number of years to be included for an attainment designation is:

- a) Three; or
- b) Two, if during these years the maximum pollutant concentration (not including data found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article) is less than three-fourths the applicable state ambient air quality standard; or
- c) One, if during this year the maximum pollutant concentration (not including data found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article) is less than one-half the applicable state ambient air quality standard.

APPENDIX 4

**SCREENING PROCEDURE FOR DETERMINING ATTAINMENT DESIGNATIONS
FOR AREAS WITH INCOMPLETE AIR QUALITY DATA**

This Appendix describes the screening procedure that will serve as the basis for making a pollutant-specific finding under section 70304(c) that the state ambient air quality standard is being attained for areas with no or an incomplete air quality data record. The procedure is applicable only for nitrogen dioxide, sulfur dioxide, sulfates, and lead (particulate). For those areas with some air quality data for the prior three years, the screening procedure will be applied for a pollutant only if the maximum concentrations of that pollutant in the area did not exceed 75 percent of the state standard(s).

<u>Pollutant</u>		<u>Screening Parameters</u>	<u>Screening Values</u>
Nitrogen Dioxide	a)	Basin Population	1,000,000 people
	b)	Total Annual NOx Emissions in Air Basin	40,000 tons/yr
	c)	Total Annual Point Source NOx Emissions in County	2,100 tons/yr
Sulfur Dioxide	a)	Total Annual Point Source SOx emissions in County	1,700 tons/yr
	b)	Maximum Annual SOx Emissions from Single Facility in County	900 tons/yr
Sulfates	a)	Total Annual SOx Emissions in Air Basin	19,000 tons/yr
	b)	Total Annual Point Source SOx Emissions in County	1,700 tons/yr
	c)	Maximum Annual SOx Emissions from Single Facility in County	900 tons/yr
Lead	a)	County Population	600,000 people
	b)	Maximum Annual Lead Emissions from Single Facility in County	0.5 tons/yr

For an area to which these values are applied, the local values of the applicable screening parameters will be compared to the respective screening values. The area will be presumed to be attainment if none of the applicable screening parameters for a pollutant exceed the associated screening values.

ATTACHMENT B

***PROPOSED AMENDMENTS TO THE
AREA DESIGNATIONS***

ATTACHMENT B

PROPOSED AMENDMENTS TO THE AREA DESIGNATIONS

CALIFORNIA CODE OF REGULATIONS, TITLE 17,
SECTIONS 60200 THROUGH 60209

(Additions are shown as underline italics and deletions as ~~strikeout~~)

60200. Description of Non-County Areas

(a) City of Calexico as defined in ~~the Imperial County Planning Local Agency Formation Commission Manual~~ by the United States Census Bureau, Census 2000 (Place ID #09710).

(b) ~~[Reserved]~~ That portion of San Bernardino County, referred to as the federal Southeast Desert Modified AQMA for Ozone, is described as follows:

That portion of San Bernardino County which lies north and east of a line described as follows: Beginning at the San Bernardino-Riverside County boundary and running north along the range line common to R. 3 E and R. 2 E, San Bernardino Base Meridian; then west along the township line common to T. 3 N and T. 2 N to the San Bernardino-Los Angeles County boundary; and that portion of San Bernardino County which lies south and west of a line described as follows: latitude 35 degrees, 10 minutes north and longitude 115 degrees, 45 minutes west.

(c) ~~[Reserved]~~ That portion of Plumas County, referred to as the Portola Valley, is described as follows:

That portion of Plumas County within Super Planning Watersheds #55183301, #55183302, #55183303, and #55183304, as defined in CalWater, version 2.2, 1999 (<http://www.ca.nrcs.usda.gov/features/calwater/index.html>).

(d) That portion of Lake County and portion of Sonoma County, referred to as the Geysers Geothermal Area, is described as follows:

Beginning at the northwest corner of T. 12 N, R. 9 W, Mount Diablo Base and Meridian; thence south along the range line common to R. 9 W and R. 10 W to the point of intersection with the Mendocino-Lake County border; thence east and south along the Mendocino-Lake County border to the point of intersection with the border of Sonoma County; thence west along the Mendocino-Sonoma County border to the point of intersection with the range line common to R. 10 W and R. 9 W; thence south along the range line common to R. 10 W and R. 9 W to the point of intersection with Big Sulfur Creek; thence southwest along Big Sulfur Creek to its confluence with Little Sulfur Creek; thence southeast, east, and northeast along Little Sulfur Creek to the point of intersection with the township line common to T. 10 N and T. 11 N; thence east along the township line common to T. 10 N and T. 11 N to the northeast corner of T. 10 N, R. 9 W; thence south along the range line common to R. 9 W and R. 8 W to

the southwest corner of T. 10 N, R. 8 W; thence east along the township line common to T. 9 N and T. 10 N to the point of intersection with the Sonoma-Napa County border; thence northwest along the Sonoma-Napa County border to the point of intersection with the Lake-Napa County border; thence northeast along the Lake-Napa County border to the point of intersection with State Highway 29 (SH-29); thence north and west along SH-29 to the point of intersection with the township line common to T. 12 N and T. 13 N; thence west along the township line common to T. 12 N and T. 13 N to the northwest corner of T. 12 N, R. 9 W, the point of beginning.

NOTE: Authority cited: Sections 39600, 39601, and 39608, Health and Safety Code.
Reference: Section 39608, Health and Safety Code.

60201. Table of Area Designations for Ozone

Area	Designation
North Coast Air Basin	<u>Attainment</u>
Sonoma County	Nonattainment-Transitional
Remainder of Air Basin	Attainment
San Francisco Bay Area Air Basin	Nonattainment
North Central Coast Air Basin	Nonattainment-Transitional
South Central Coast Air Basin	
San Luis Obispo County	Nonattainment-Transitional
Remainder of Air Basin	Nonattainment
South Coast Air Basin	Nonattainment
San Diego Air Basin	Nonattainment
Northeast Plateau Air Basin	Attainment
Sacramento Valley Air Basin	
Butte County	Nonattainment-Transitional
<u>Colusa County</u>	<u>Nonattainment-Transitional</u>
Glenn County	Nonattainment-Transitional
Remainder of Air Basin	Nonattainment
San Joaquin Valley Air Basin	Nonattainment
Great Basin Valleys Air Basin	
Alpine County	Unclassified
Inyo County	Unclassified
Mono County	Nonattainment
Mojave Desert Air Basin	Nonattainment
Salton Sea Air Basin	Nonattainment

60201. Table of Area Designations for Ozone (continued)

Area	Designation
Mountain Counties Air Basin	
Amador, Calaveras, El Dorado, Nevada, Placer, Mariposa, and Tuolumne Counties	Nonattainment
Plumas and Sierra Counties	Unclassified
Lake County Air Basin	Attainment
Lake Tahoe Air Basin	Attainment

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: sections 39608 and 40925.5, Health and Safety Code.

60202. Table of Area Designations for Carbon Monoxide

Area	Designation
North Coast Air Basin	
Del Norte County	Unclassified
Humboldt County	Attainment
Mendocino County	Attainment
Sonoma County	Unclassified
Trinity County	Unclassified
San Francisco Bay Area Air Basin	
Alameda County	Attainment
Contra Costa County	Attainment
Marin County	Attainment
Napa County	Attainment
San Francisco County	Attainment
San Mateo County	Attainment
Santa Clara County	Attainment
Solano County	Attainment
Sonoma County	Attainment
North Central Coast Air Basin	
Monterey County	Attainment
San Benito County	Unclassified
Santa Cruz County	Unclassified
South Central Coast Air Basin	
San Luis Obispo County	Attainment
Santa Barbara County	Attainment
Ventura County	Attainment
South Coast Air Basin	
Los Angeles County	Nonattainment- <u>Transitional</u>
Orange County	Attainment
Riverside County	Attainment
San Bernardino County	Attainment
San Diego Air Basin	Attainment
Northeast Plateau Air Basin	
Lassen County	Unclassified
Modoc County	Unclassified
Siskiyou County	Unclassified

60202. Table of Area Designations for Carbon Monoxide (continued)

Area	Designation
Sacramento Valley Air Basin	
Butte County	Attainment
Colusa County	Unclassified
Glenn County	Unclassified
Placer County	Attainment
Sacramento County	Attainment
Shasta County	Unclassified
Solano County	Attainment
Sutter County	Attainment
Tehama County	Unclassified
Yolo County	Attainment
Yuba County	Unclassified
San Joaquin Valley Air Basin	
Fresno County	Attainment
Kern County	Attainment
Kings County	Unclassified
Madera County	Unclassified
Merced County	Unclassified
San Joaquin County	Attainment
Stanislaus County	Attainment
Tulare County	Attainment
Great Basin Valleys Air Basin	
Alpine County	Unclassified
Inyo County	Attainment
Mono County	Attainment

60202. Table of Area Designations for Carbon Monoxide (continued)

Area	Designation
Mojave Desert Air Basin	
Kern County	Unclassified
Los Angeles County	Attainment
Riverside County	Unclassified
San Bernardino County	Attainment
Salton Sea Air Basin	
Imperial County	
City of Calexico ¹	Nonattainment
Remainder of County	Unclassified
Riverside County	Attainment
Mountain Counties Air Basin	
Amador County	Unclassified
Calaveras County	Unclassified
El Dorado County	Unclassified
Mariposa County	Unclassified
Nevada County	Unclassified
Placer County	Unclassified
Plumas County	Attainment
Sierra County	Unclassified
Tuolumne County	Attainment
Lake County Air Basin	
Lake County	Attainment
Lake Tahoe Air Basin	Attainment

¹ section 60200(a).

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60203. Table of Area Designations for Nitrogen Dioxide

Area	Designation
North Coast Air Basin	Attainment
San Francisco Bay Area Air Basin	Attainment
North Central Coast Air Basin	Attainment
South Central Coast Air Basin	Attainment
South Coast Air Basin	Attainment
San Diego Air Basin	Attainment
Northeast Plateau Air Basin	Attainment
Sacramento Valley Air Basin	Attainment
San Joaquin Valley Air Basin	Attainment
Great Basin Valleys Air Basin	Attainment
Mojave Desert Air Basin	Attainment
Salton Sea Air Basin	Attainment
Mountain Counties Air Basin	Attainment
Lake County Air Basin	Attainment
Lake Tahoe Air Basin	Attainment

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
 Reference: section 39608, Health and Safety Code.

60204. Table of Area Designations for Sulfur Dioxide

Area	Designation
North Coast Air Basin	Attainment
San Francisco Bay Area Air Basin	
Alameda County	Attainment
Contra Costa County	Attainment
Marin County	Attainment
Napa County	Attainment
San Francisco County	Attainment
San Mateo County	Attainment
Santa Clara County	Attainment
Solano County	Attainment
Sonoma County	Attainment
North Central Coast Air Basin	
Monterey County	Attainment
San Benito County	Attainment
Santa Cruz County	Attainment
South Central Coast Air Basin	
San Luis Obispo County	Attainment
Santa Barbara County	Attainment
Ventura County	Attainment
South Coast Air Basin	
Los Angeles County	Attainment
Orange County	Attainment
Riverside County	Attainment
San Bernardino County	Attainment
San Diego Air Basin	
San Diego County	Attainment
Northeast Plateau Air Basin	
Lassen County	Attainment
Modoc County	Attainment
Siskiyou County	Attainment

60204. Table f Area Designations for Sulfur Dioxide (c ntinued)

Area	Designation
Sacramento Valley Air Basin	
Butte County	Attainment
Colusa County	Attainment
Glenn County	Attainment
Placer County	Attainment
Sacramento County	Attainment
Shasta County	Attainment
Solano County	Attainment
Sutter County	Attainment
Tehama County	Attainment
Yolo County	Attainment
Yuba County	Attainment
San Joaquin Valley Air Basin	
Fresno County	Attainment
Kern County	Attainment
Kings County	Attainment
Madera County	Attainment
Merced County	Attainment
San Joaquin County	Attainment
Stanislaus County	Attainment
Tulare County	Attainment
Great Basin Valleys Air Basin	
Alpine County	Attainment
Inyo County	Attainment
Mono County	Attainment
Mojave Desert Air Basin	
Kern County	Attainment
Los Angeles County	Attainment
Riverside County	Attainment
San Bernardino County	Attainment

60204. Table of Area Designations for Sulfur Dioxide (continued)

Area	Designation
Salton Sea Air Basin	
Imperial County	Attainment
Riverside County	Attainment
Mountain Counties Air Basin	
Amador County	Attainment
Calaveras County	Attainment
El Dorado County	Attainment
Mariposa County	Attainment
Nevada County	Attainment
Placer County	Attainment
Plumas County	Attainment
Sierra County	Attainment
Tuolumne County	Attainment
Lake County Air Basin	
Lake County	Attainment
Lake Tahoe Air Basin	
El Dorado County	Attainment
Placer County	Attainment

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60205. Table of Area Designations for Suspended Particulate Matter (PM₁₀)

Area	Designation
North Coast Air Basin	Nonattainment
San Francisco Bay Area Air Basin	Nonattainment
North Central Coast Air Basin	Nonattainment
South Central Coast Air Basin	Nonattainment
South Coast Air Basin	Nonattainment
San Diego Air Basin	Nonattainment
Northeast Plateau Air Basin	Nonattainment
Sacramento Valley Air Basin	Nonattainment
San Joaquin Valley Air Basin	Nonattainment
Great Basin Valleys Air Basin	Nonattainment
Mojave Desert Air Basin	Nonattainment
Salton Sea Air Basin	Nonattainment
Mountain Counties Air Basin	
El Dorado, Nevada, Placer Plumas, and Sierra Counties	Nonattainment
Amador County	Unclassified
Calaveras County	Nonattainment
Mariposa County Portion of Yosemite National Park	Nonattainment
Remainder of Mariposa and Tuolumne Counties	Unclassified
Lake County Air Basin	Attainment
Lake Tahoe Air Basin	Nonattainment

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code

60206. Table of Area Designations for Sulfates

Area	Designation
North Coast Air Basin	Attainment
San Francisco Bay Area Air Basin	Attainment
North Central Coast Air Basin	Attainment
South Central Coast Air Basin	Attainment
South Coast Air Basin	Attainment
San Diego Air Basin	Attainment
Northeast Plateau Air Basin	Attainment
Sacramento Valley Air Basin	Attainment
San Joaquin Valley Air Basin	Attainment
Great Basin Valleys Air Basin	Attainment
Mojave Desert Air Basin	<u>Attainment</u>
San Bernardino County Portion of Searles Valley Planning Area ⁺	Nonattainment
Remainder of Air Basin	Attainment
Salton Sea Air Basin	Attainment
Mountain Counties Air Basin	Attainment
Lake County Air Basin	Attainment
Lake Tahoe Air Basin	Attainment

⁺ ~~52 Fed. Reg. 29384 (August 7, 1987); U.S. Geological Survey 1974, *Hydrologic Unit Map State of California*, Hydrological Unit #18090205.~~

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60207. Table of Area Designations for Lead (Particulate)

Area	Designation
North Coast Air Basin	
Del Norte County	Attainment
Humboldt County	Attainment
Mendocino County	Attainment
Sonoma County	Attainment
Trinity County	Attainment
San Francisco Bay Area Air Basin	
Alameda County	Attainment
Contra Costa County	Attainment
Marin County	Attainment
Napa County	Attainment
San Francisco County	Attainment
San Mateo County	Attainment
Santa Clara County	Attainment
Solano County	Attainment
Sonoma County	Attainment
North Central Coast Air Basin	
Monterey County	Attainment
San Benito County	Attainment
Santa Cruz County	Attainment
South Central Coast Air Basin	
San Luis Obispo County	Attainment
Santa Barbara County	Attainment
Ventura County	Attainment
South Coast Air Basin	
Los Angeles County	Attainment
Orange County	Attainment
Riverside County	Attainment
San Bernardino County	Attainment
San Diego Air Basin	
San Diego County	Attainment
Northeast Plateau Air Basin	
Lassen County	Attainment
Modoc County	Attainment
Siskiyou County	Attainment

60207. Table of Area Designations for Lead (Particulate) (continued)

Area	Designation
Sacramento Valley Air Basin	
Butte County	Attainment
Colusa County	Attainment
Glenn County	Attainment
Placer County	Attainment
Sacramento County	Attainment
Shasta County	Attainment
Solano County	Attainment
Sutter County	Attainment
Tehama County	Attainment
Yolo County	Attainment
Yuba County	Attainment
San Joaquin Valley Air Basin	
Fresno County	Attainment
Kern County	Attainment
Kings County	Attainment
Madera County	Attainment
Merced County	Attainment
San Joaquin County	Attainment
Stanislaus County	Attainment
Tulare County	Attainment
Great Basin Valleys Air Basin	
Alpine County	Attainment
Inyo County	Attainment
Mono County	Attainment

60207. Table of Area Designations for Lead (Particulate) (continued)

Area	Designation
Mojave Desert Air Basin	
Kern County	Attainment
Los Angeles County	Attainment
Riverside County	Attainment
San Bernardino County	Attainment
Salton Sea Air Basin	
Imperial County	Attainment
Riverside County	Attainment
Mountain Counties Air Basin	
Amador County	Attainment
Calaveras County	Attainment
El Dorado County	Attainment
Mariposa County	Attainment
Nevada County	Attainment
Placer County	Attainment
Plumas County	Attainment
Sierra County	Attainment
Tuolumne County	Attainment
Lake County Air Basin	
Lake County	Attainment
Lake Tahoe Air Basin	
El Dorado County	Attainment
Placer County	Attainment

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60208. Table of Area Designations for Hydrogen Sulfide

Area	Designation
North Coast Air Basin	
Del Norte County	Unclassified
Humboldt County	Attainment
Mendocino County	Unclassified
Sonoma County	
Geyser Geothermal Area ¹	Attainment
Remainder of County	Unclassified
Trinity County	Unclassified
San Francisco Bay Area Air Basin	
Alameda County	Unclassified
Contra Costa County	Unclassified
Marin County	Unclassified
Napa County	Unclassified
San Francisco County	Unclassified
San Mateo County	Unclassified
Santa Clara County	Unclassified
Solano County	Unclassified
Sonoma County	Unclassified
North Central Coast Air Basin	
Monterey County	Unclassified
San Benito County	Unclassified
Santa Cruz County	Unclassified
South Central Coast Air Basin	
San Luis Obispo County	Attainment
Santa Barbara County	Attainment
Ventura County	Unclassified
South Coast Air Basin	
Los Angeles County	Unclassified
Orange County	Unclassified
Riverside County	Unclassified
San Bernardino County	Unclassified
San Diego Air Basin	
San Diego County	Unclassified
Northeast Plateau Air Basin	
Lassen County	Unclassified
Modoc County	Unclassified
Siskiyou County	Unclassified

60208. Table of Area Designations for Hydrogen Sulfide (continued)

Area	Designation
Sacramento Valley Air Basin	
Butte County	Unclassified
Colusa County	Unclassified
Glenn County	Unclassified
Placer County	Unclassified
Sacramento County	Unclassified
Shasta County	Unclassified
Solano County	Unclassified
Sutter County	Unclassified
Tehama County	Unclassified
Yolo County	Unclassified
Yuba County	Unclassified
San Joaquin Valley Air Basin	
Fresno County	Unclassified
Kern County	Unclassified
Kings County	Unclassified
Madera County	Unclassified
Merced County	Unclassified
San Joaquin County	Unclassified
Stanislaus County	Unclassified
Tulare County	Unclassified
Great Basin Valleys Air Basin	
Alpine County	Unclassified
Inyo County	Attainment
Mono County	Attainment

60208. Table of Area Designations for Hydrogen Sulfide (continued)

Area	Designation
Mojave Desert Air Basin	
Kern County	Unclassified
Los Angeles County	Unclassified
Riverside County	Unclassified
San Bernardino County	
County Portion of Searles Valley Planning Area ²	Nonattainment
Remainder of County	Unclassified
Salton Sea Air Basin	
Imperial County	Unclassified
Riverside County	Unclassified
Mountain Counties Air Basin	
Amador County	
City of Sutter Creek	Nonattainment
Remainder of County	Unclassified
Calaveras County	Unclassified
El Dorado County	Unclassified
Mariposa County	Unclassified
Nevada County	Unclassified
Placer County	Unclassified
Plumas County	Unclassified
Sierra County	Unclassified
Tuolumne County	Unclassified
Lake County Air Basin	
Lake County	Attainment
Lake Tahoe Air Basin	
El Dorado County	Unclassified
Placer County	Unclassified

¹ section 60200(d).

² 52 Fed. Reg. 29384 (August 7, 1987); U.S. Geological Survey 1974, *Hydrologic Unit Map-State of California*, Hydrological Unit #18090205.

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60209. Table of Area Designations for Visibility Reducing Particles

Area	Designation
North Coast Air Basin	Unclassified
San Francisco Bay Area Air Basin	Unclassified
North Central Coast Air Basin	Unclassified
South Central Coast Air Basin	Unclassified
South Coast Air Basin	Unclassified
San Diego Air Basin	Unclassified
Northeast Plateau Air Basin	Unclassified
Sacramento Valley Air Basin	Unclassified
San Joaquin Valley Air Basin	Unclassified
Great Basin Valleys Air Basin	Unclassified
Mojave Desert Air Basin	Unclassified
Salton Sea Air Basin	Unclassified
Mountain Counties Air Basin	Unclassified
Lake County Air Basin	Attainment
Lake Tahoe Air Basin	Unclassified

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

60210. Table of Area Designations for Fine Particulate Matter (PM_{2.5})

<u>Area</u>	<u>Designation</u>
<u>North Coast Air Basin</u>	<u>Unclassified</u>
<u>San Francisco Bay Area Air Basin</u>	<u>Nonattainment</u>
<u>North Central Coast Air Basin</u>	<u>Unclassified</u>
<u>South Central Coast Air Basin</u>	
<u>San Luis Obispo and Santa Barbara Counties</u>	<u>Unclassified</u>
<u>Ventura County</u>	<u>Nonattainment</u>
<u>South Coast Air Basin</u>	<u>Nonattainment</u>
<u>San Diego Air Basin</u>	<u>Nonattainment</u>
<u>Northeast Plateau Air Basin</u>	<u>Unclassified</u>
<u>Sacramento Valley Air Basin</u>	
<u>Butte County</u>	<u>Nonattainment</u>
<u>Placer, and Sacramento Counties</u>	<u>Nonattainment</u>
<u>Remainder of Air Basin</u>	<u>Unclassified</u>
<u>San Joaquin Valley Air Basin</u>	<u>Nonattainment</u>
<u>Great Basin Valleys Air Basin</u>	<u>Unclassified</u>
<u>Mojave Desert Air Basin</u>	
<u>San Bernardino County</u>	
<u>County Portion of federal Southeast Desert</u>	
<u>Modified AQMA for Ozone¹</u>	<u>Nonattainment</u>
<u>Remainder of San Bernardino County and</u>	
<u>Kern, Los Angeles, and Riverside Counties</u>	<u>Unclassified</u>
<u>Salton Sea Air Basin</u>	
<u>Imperial County</u>	
<u>City of Calexico²</u>	<u>Nonattainment</u>
<u>Remainder of Imperial County and Riverside County</u>	<u>Unclassified</u>
<u>Mountain Counties Air Basin</u>	
<u>Plumas County</u>	
<u>Portola Valley³</u>	<u>Nonattainment</u>
<u>Remainder of Plumas County and Amador,</u>	
<u>Calaveras, El Dorado, Mariposa, Nevada,</u>	
<u>Placer, Sierra, and Tuolumne Counties</u>	<u>Unclassified</u>
<u>Lake County Air Basin</u>	<u>Attainment</u>
<u>Lake Tahoe Air Basin</u>	<u>Unclassified</u>

¹ section 60200(b).² section 60200(a).³ section 60200(c).

NOTE: Authority cited: sections 39600, 39601, and 39608, Health and Safety Code.
Reference: section 39608, Health and Safety Code.

ATTACHMENT C***MAPS AND TABLES OF AREA DESIGNATIONS FOR
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS***

ATTACHMENT C**MAPS AND TABLES OF AREA DESIGNATIONS FOR
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS**

This attachment fulfills the requirement of Health and Safety Code, section 40718 for the Board to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the 2003 area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for each pollutant for which there is a national standard.

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²			
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³) ⁸	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	—		0.08 ppm (157 µg/m ³) ⁸			
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		50 µg/m ³			
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³			
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)	
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—			
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence	
	1 Hour	0.25 ppm (470 µg/m ³)		—			
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	—	Spectrophotometry (Pararosaniline Method)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)			
	3 Hour	—		—			0.5 ppm (1300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)		—			—
Lead ⁹	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	Same as Primary Standard	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	—		1.5 µg/m ³			
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards			
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ⁹	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.
8. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.
9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Area Designations for the State Ambient Air Quality Standards

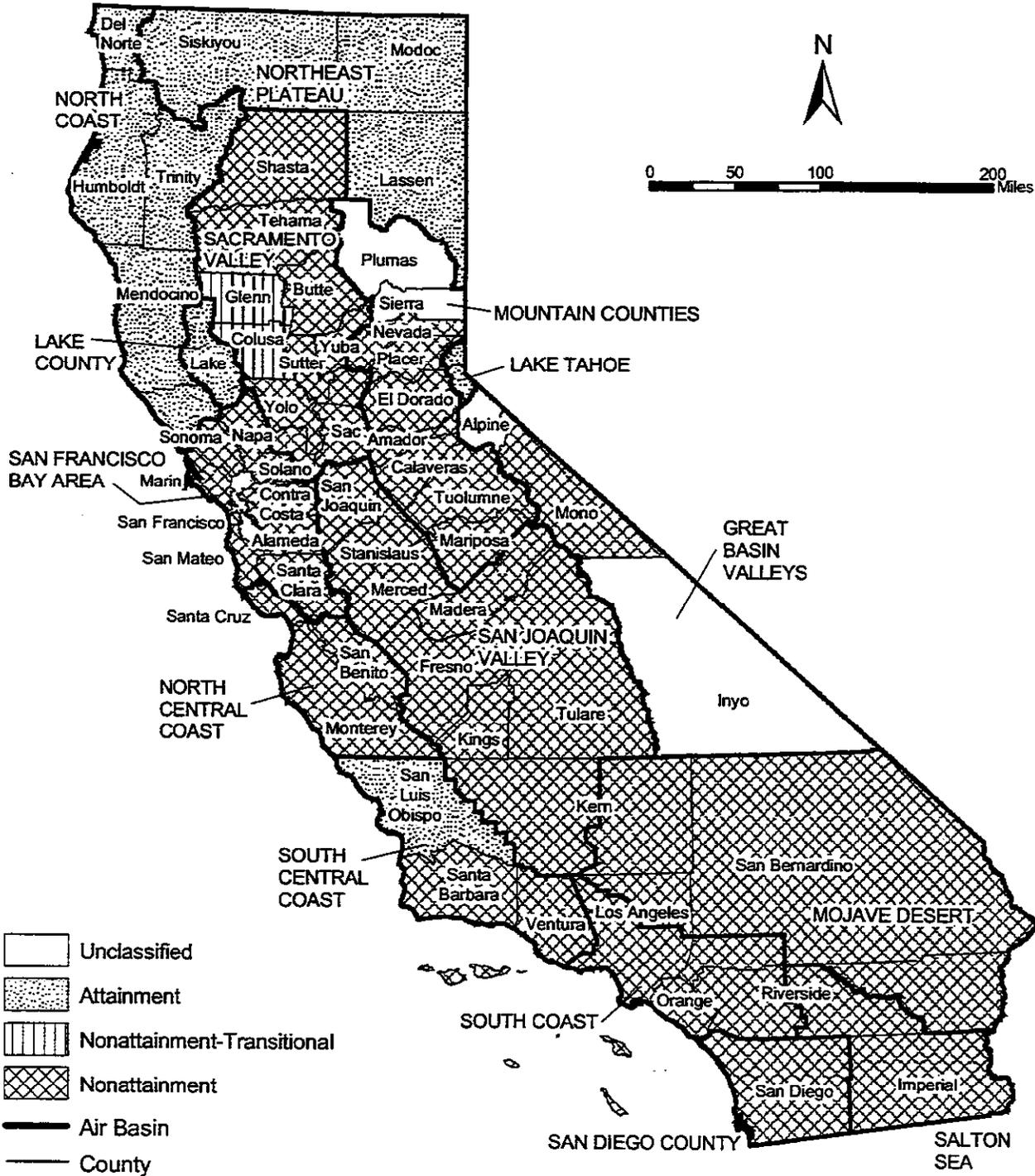
The area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200 are presented in the following maps and tables. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NT
Unclassified	U

Generally, the Board designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, the Board may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

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2003 Area Designations for State Ambient Air Quality Standards OZONE



Source Date:
October 2003
Emission Inventory Branch, PTSD

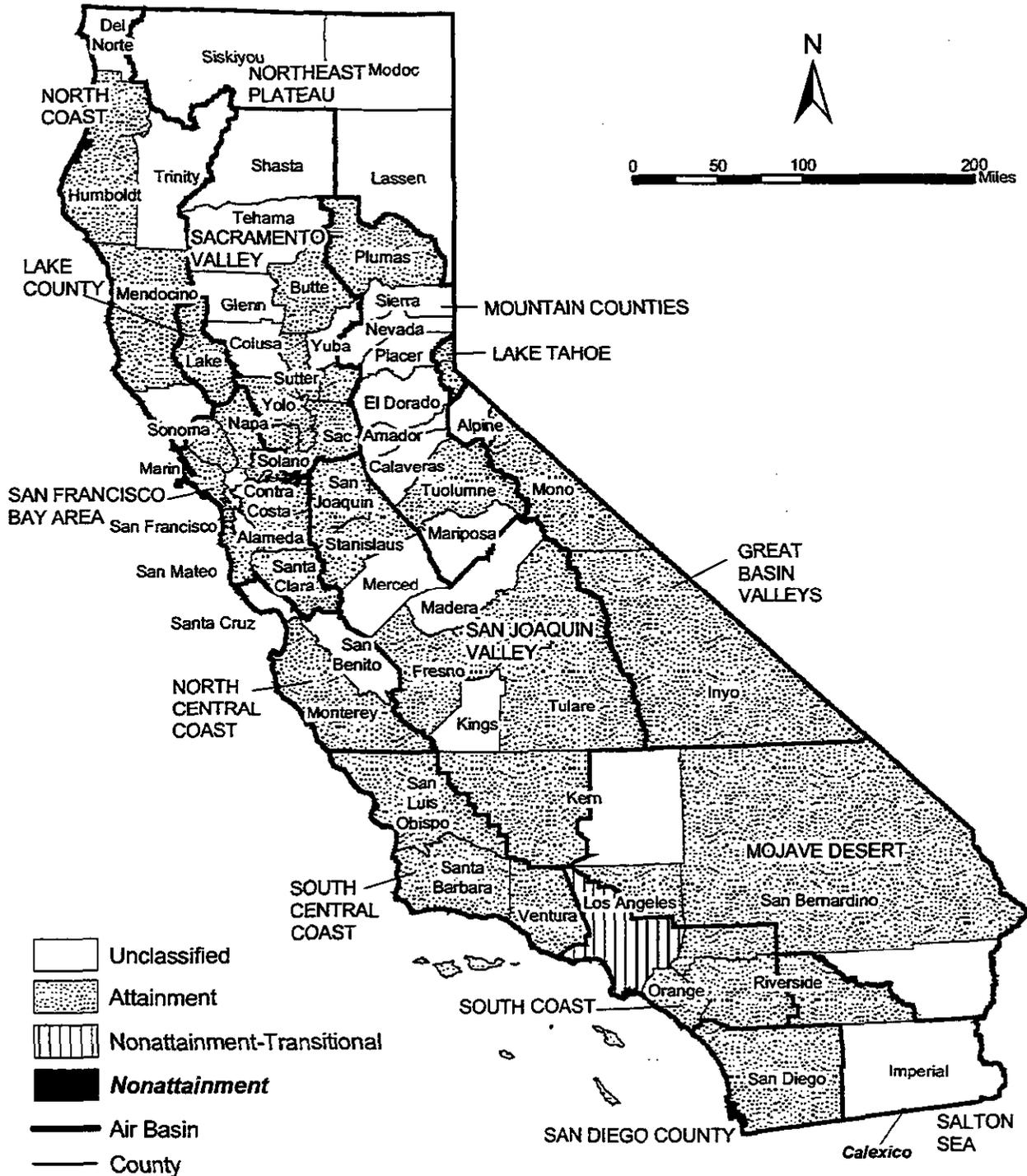
TABLE 1

**California Ambient Air Quality Standards
Area Designations for Ozone**

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN				X	MOJAVE DESERT AIR BASIN	X			
SAN FRANCISCO BAY AREA AIR BASIN	X				SALTON SEA AIR BASIN	X			
NORTH CENTRAL COAST AIR BASIN	X				MOUNTAIN COUNTIES AIR BASIN (MCAB)				
SOUTH CENTRAL COAST AIR BASIN					Amador County	X			
San Luis Obispo County				X	Calaveras County	X			
Remainder of SCCAB	X				El Dorado County (MCAB portion)	X			
SOUTH COAST AIR BASIN	X				Mariposa County	X			
SAN DIEGO AIR BASIN	X				Nevada County	X			
NORTHEAST PLATEAU AIR BASIN				X	Placer County (MCAB portion)	X			
SACRAMENTO VALLEY AIR BASIN					Plumas County				X
Glenn County (1)		X			Sierra County				X
Colusa County (1)		X			Tuolumne County	X			
Remainder of SVAB	X				LAKE COUNTY AIR BASIN				X
SAN JOAQUIN VALLEY AIR BASIN	X				LAKE TAHOE AIR BASIN				X
GREAT BASIN VALLEYS AIR BASIN									
Alpine County			X						
Inyo County			X						
Mono County	X								

(1) AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows districts to become nonattainment-transitional for ozone by operation of law.

2003 Area Designations for State Ambient Air Quality Standards CARBON MONOXIDE



Source Date:
October 2003
Emission Inventory Branch, PTSD

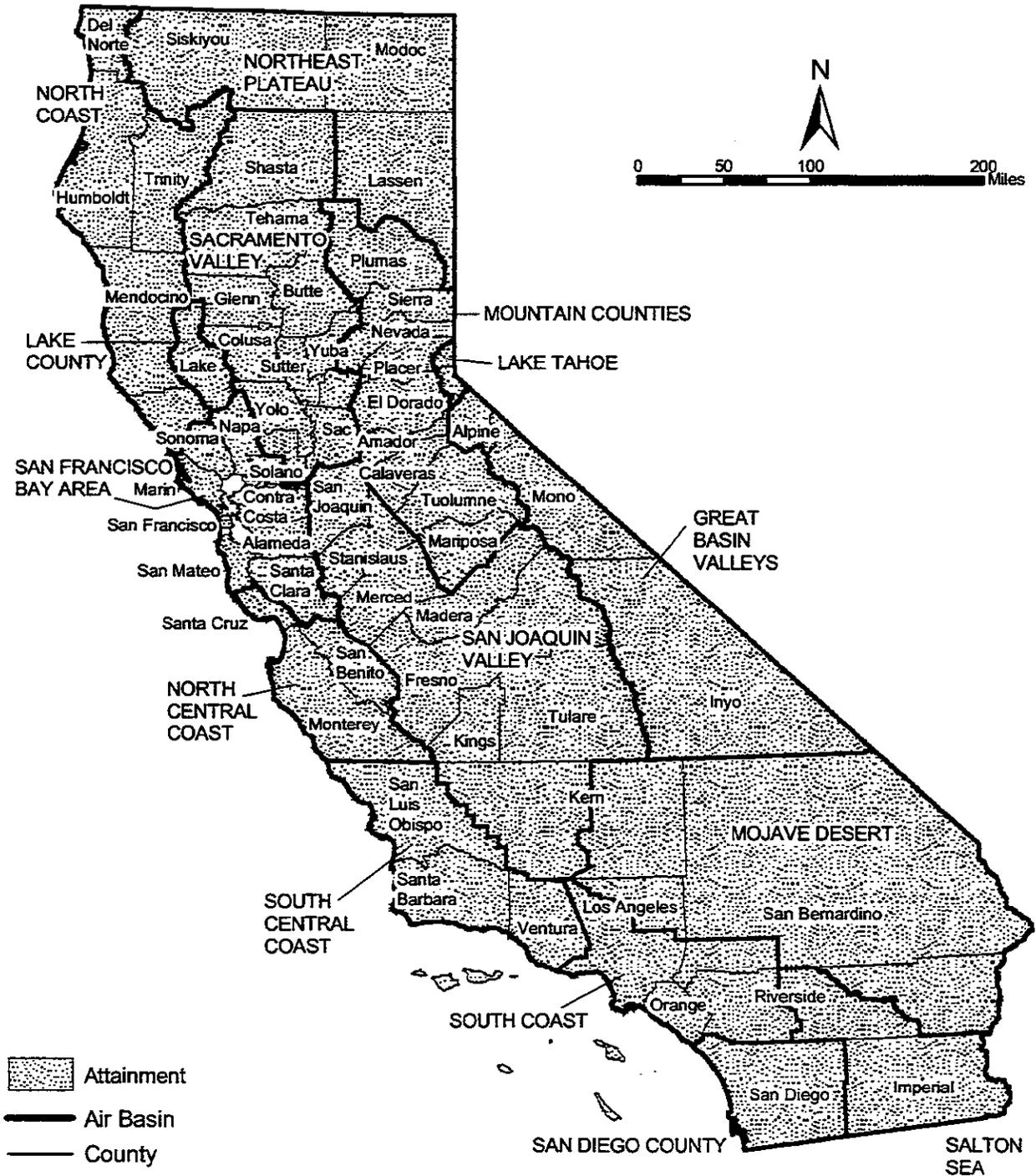
TABLE 2

**California Ambient Air Quality Standards
Area Designations for Carbon Monoxide ***

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN (NCAB)					SAN JOAQUIN VALLEY AIR BASIN (cont.)				
Del Norte County			X		Kings County			X	
Humboldt County				X	Madera County			X	
Mendocino County				X	Merced County			X	
Sonoma County (NCAB portion)			X		San Joaquin County				X
Trinity County			X		Stanislaus County				X
SAN FRANCISCO BAY AREA AIR BASIN				X	Tulare County				X
NORTH CENTRAL COAST AIR BASIN					GREAT BASIN VALLEYS AIR BASIN				
Monterey County				X	Alpine County			X	
San Benito County			X		Inyo County				X
Santa Cruz County			X		Mono County				X
SOUTH CENTRAL COAST AIR BASIN				X	MOJAVE DESERT AIR BASIN (MDAB)				
SOUTH COAST AIR BASIN (SoCAB)					Kern County (MDAB portion)			X	
Los Angeles County (SoCAB portion)		X			Los Angeles County (MDAB portion)				X
Orange County				X	Riverside County (MDAB portion)			X	
Riverside County (SoCAB portion)				X	San Bernardino County (MDAB portion)				X
San Bernardino County (SoCAB portion)				X	SALTON SEA AIR BASIN (SSAB)				
SAN DIEGO AIR BASIN				X	Imperial County				
NORTHEAST PLATEAU AIR BASIN			X		-City of Calexico (1)	X			
SACRAMENTO VALLEY AIR BASIN (SVAB)					-Remainder of County			X	
Butte County				X	Riverside County (SSAB portion)				X
Colusa County			X		MOUNTAIN COUNTIES AIR BASIN (MCAB)				
Glenn County			X		Amador County			X	
Placer County (SVAB portion)				X	Calaveras County			X	
Sacramento County				X	El Dorado County (MCAB portion)			X	
Shasta County			X		Mariposa County			X	
Solano County (SVAB portion)				X	Nevada County			X	
Sutter County				X	Placer County (MCAB portion)			X	
Tehama County			X		Plumas County				X
Yolo County				X	Sierra County			X	
Yuba County			X		Tuolumne County				X
SAN JOAQUIN VALLEY AIR BASIN (SJVAB)					LAKE COUNTY AIR BASIN				X
Fresno County				X	LAKE TAHOE AIR BASIN				X
Kern County (SJVAB portion)				X					

* The area designated for carbon monoxide is a county or portion of a county.
(1) California Code of Regulations, title 17, section 60200(a).

2003 Area Designations for State Ambient Air Quality Standards NITROGEN DIOXIDE



Source Date:
October 2003
Emission Inventory Branch, PTSD

TABLE 3

**California Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide**

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN				X	SAN JOAQUIN VALLEY AIR BASIN				X
SAN FRANCISCO BAY AREA AIR BASIN				X	GREAT BASIN VALLEYS AIR BASIN				X
NORTH CENTRAL COAST AIR BASIN				X	MOJAVE DESERT AIR BASIN				X
SOUTH CENTRAL COAST AIR BASIN				X	SALTON SEA AIR BASIN				X
SOUTH COAST AIR BASIN				X	MOUNTAIN COUNTIES AIR BASIN				X
SAN DIEGO AIR BASIN				X	LAKE COUNTY AIR BASIN				X
NORTHEAST PLATEAU AIR BASIN				X	LAKE TAHOE AIR BASIN				X
SACRAMENTO VALLEY AIR BASIN				X					

2003 Area Designations for State Ambient Air Quality Standards SULFUR DIOXIDE

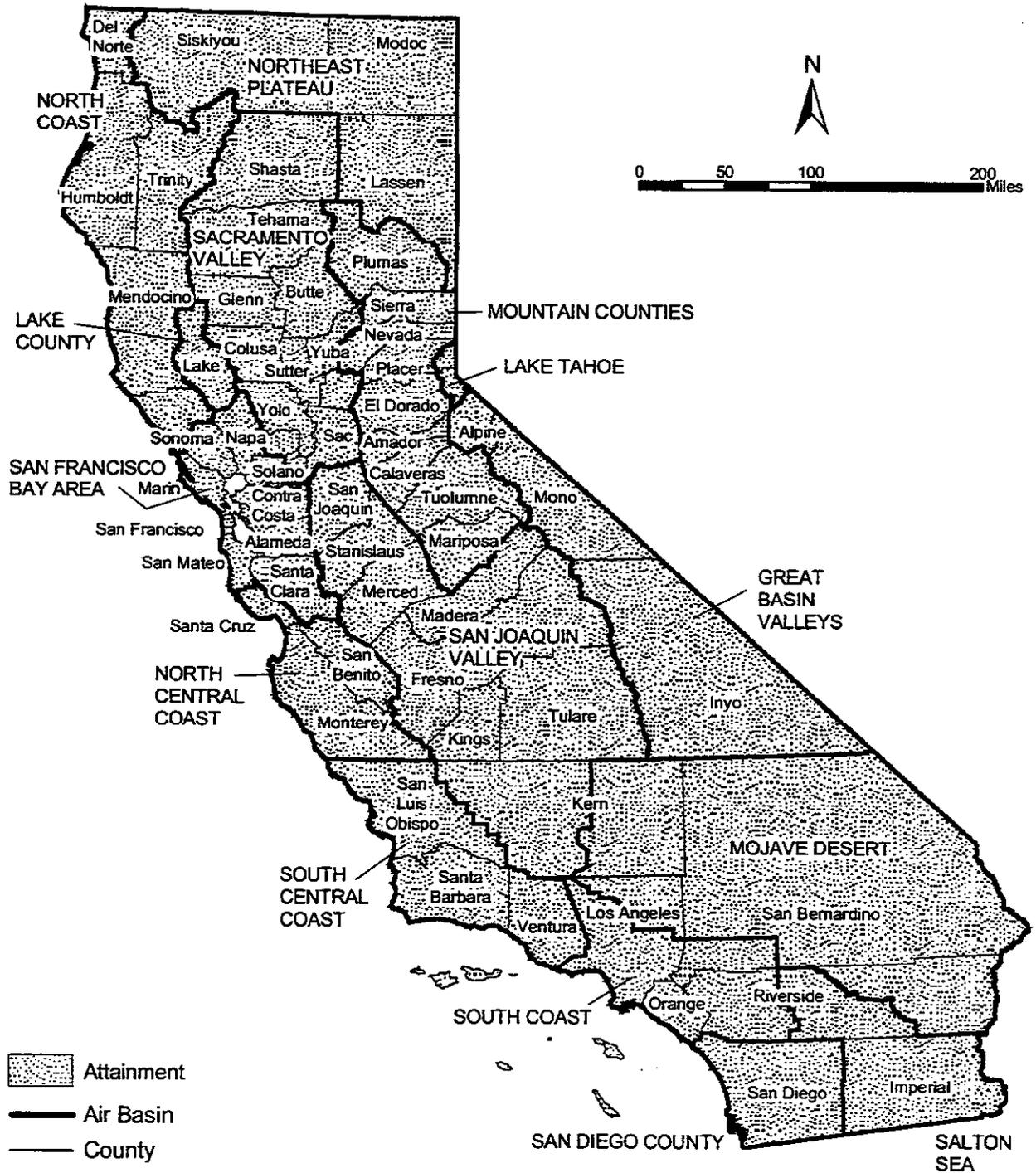


TABLE 4

**California Ambient Air Quality Standards
Area Designations for Sulfur Dioxide***

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN				X	SAN JOAQUIN VALLEY AIR BASIN				X
SAN FRANCISCO BAY AREA AIR BASIN				X	GREAT BASIN VALLEYS AIR BASIN				X
NORTH CENTRAL COAST AIR BASIN				X	MOJAVE DESERT AIR BASIN				X
SOUTH CENTRAL COAST AIR BASIN				X	SALTON SEA AIR BASIN				X
SOUTH COAST AIR BASIN				X	MOUNTAIN COUNTIES AIR BASIN				X
SAN DIEGO AIR BASIN				X	LAKE COUNTY AIR BASIN				X
NORTHEAST PLATEAU AIR BASIN				X	LAKE TAHOE AIR BASIN				X
SACRAMENTO VALLEY AIR BASIN				X					

* The area designated for sulfur dioxide is a county or portion of a county.

2003 Area Designations for State Ambient Air Quality Standards PM₁₀



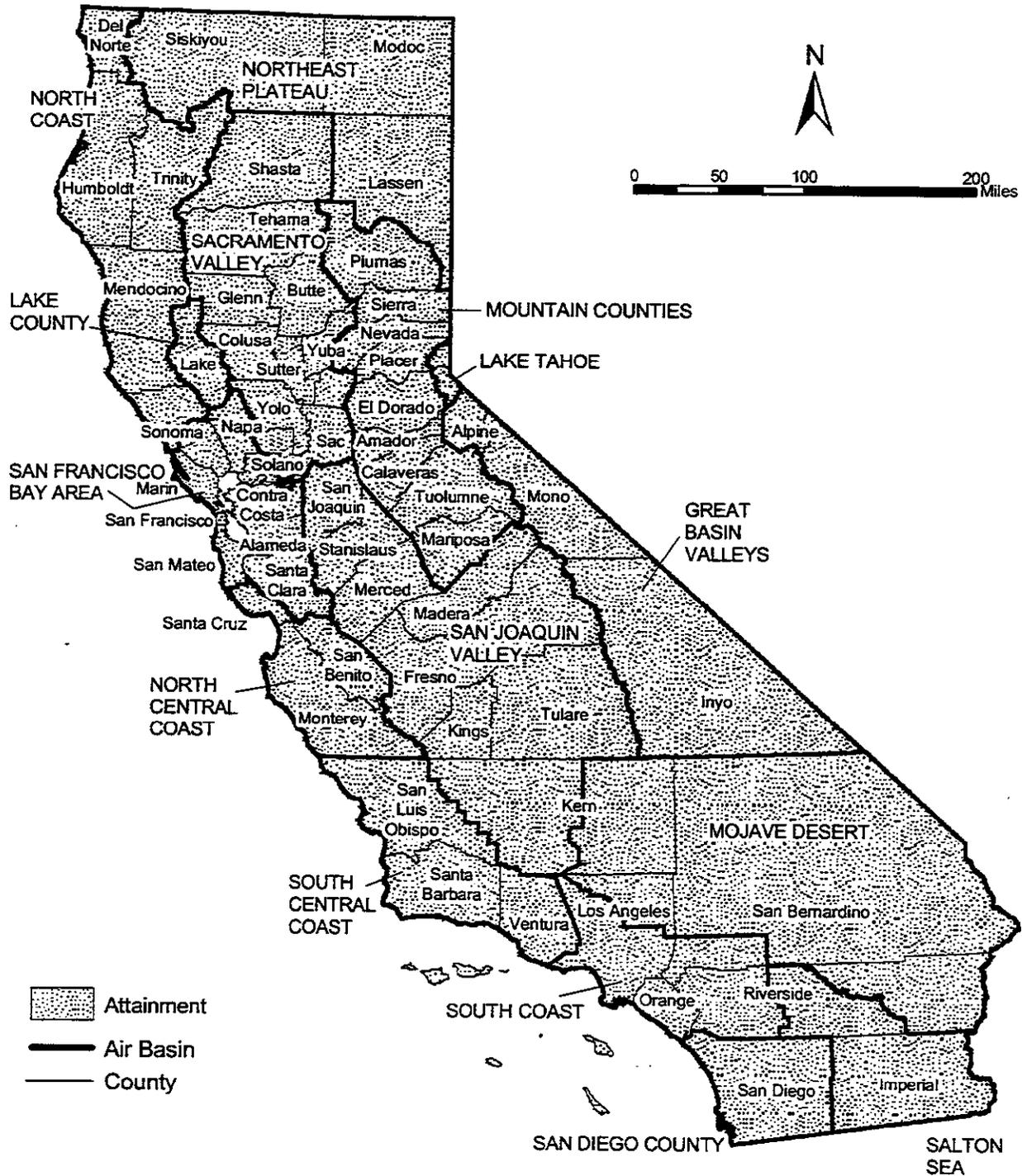
Source Date:
October 2003
Emission Inventory Branch, PTSD

TABLE 5

**California Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM₁₀)**

	N	U	A		N	U	A
NORTH COAST AIR BASIN	X			MOUNTAIN COUNTIES AIR BASIN (MCAB) (cont.)			
SAN FRANCISCO BAY AREA AIR BASIN	X			Calaveras County	X		
NORTH CENTRAL COAST AIR BASIN	X			El Dorado County (MCAB portion)	X		
SOUTH CENTRAL COAST AIR BASIN	X			Mariposa County			
SOUTH COAST AIR BASIN	X			-Yosemite National Park	X		
SAN DIEGO AIR BASIN	X			-Remainder of County		X	
NORTHEAST PLATEAU AIR BASIN	X			Nevada County	X		
SACRAMENTO VALLEY AIR BASIN	X			Placer County (MCAB portion)	X		
SAN JOAQUIN VALLEY AIR BASIN	X			Plumas County	X		
GREAT BASIN VALLEYS AIR BASIN	X			Sierra County	X		
MOJAVE DESERT AIR BASIN	X			Tuolumne County		X	
SALTON SEA AIR BASIN	X			LAKE COUNTY AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN (MCAB)				LAKE TAHOE AIR BASIN	X		
Amador County		X					

2003 Area Designations for State Ambient Air Quality Standards SULFATES



Source Date:
October 2003
Emission Inventory Branch, PTSD

TABLE 6

**California Ambient Air Quality Standards
Area Designations for Sulfates**

	N	U	A		N	U	A
NORTH COAST AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
SAN FRANCISCO BAY AREA AIR BASIN			X	GREAT BASIN VALLEYS AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	MOJAVE DESERT AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN			X	SALTON SEA AIR BASIN			X
SOUTH COAST AIR BASIN			X	MOUNTAIN COUNTIES AIR BASIN			X
SAN DIEGO AIR BASIN			X	LAKE COUNTY AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X	LAKE TAHOE AIR BASIN			X
SACRAMENTO VALLEY AIR BASIN			X				

2003 Area Designations for State Ambient Air Quality Standards LEAD

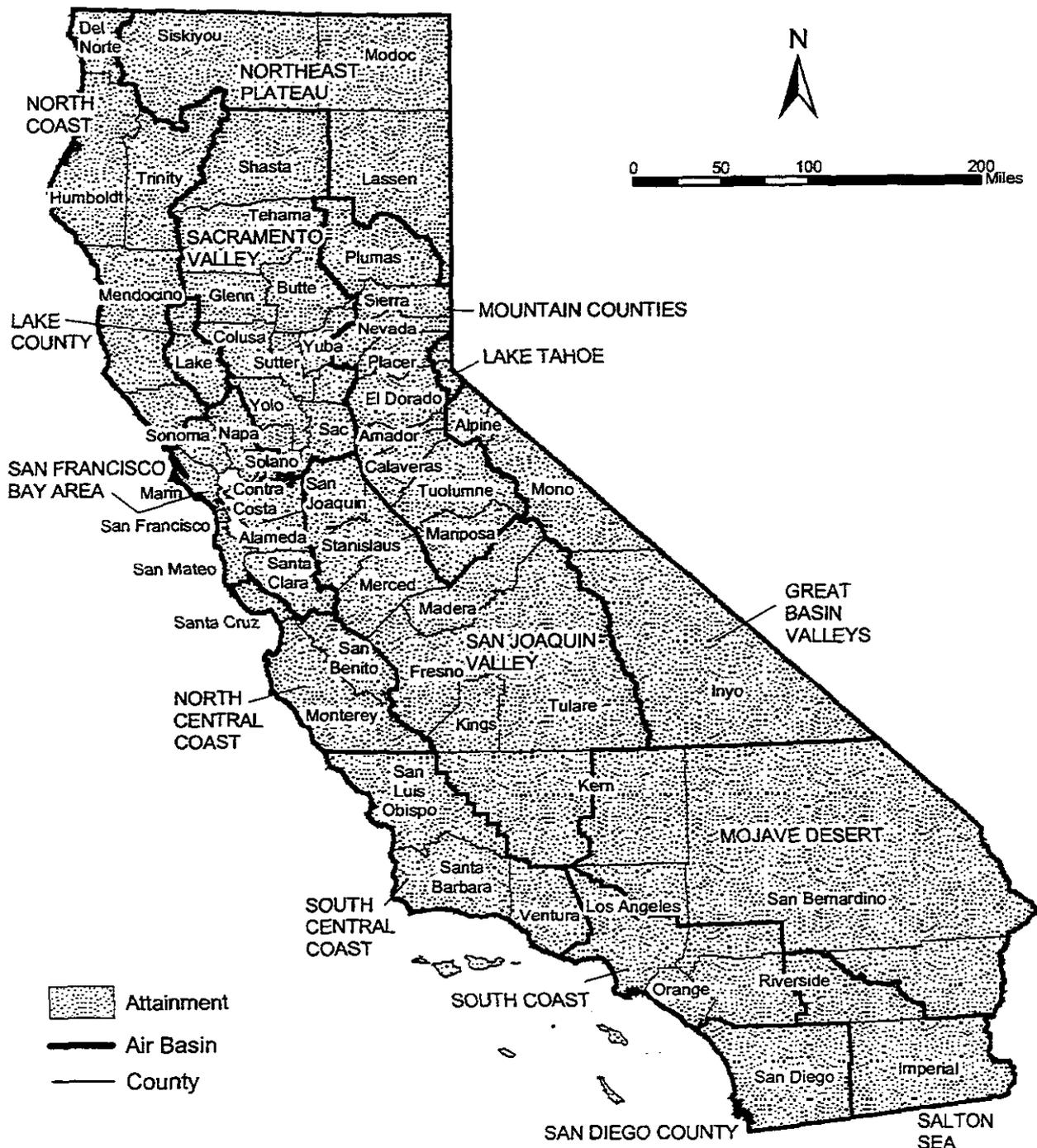


TABLE 7

**California Ambient Air Quality Standards
Area Designations for Lead (particulate) ***

	N	U	A		N	U	A
NORTH COAST AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
SAN FRANCISCO BAY AREA AIR BASIN			X	GREAT BASIN VALLEYS AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	MOJAVE DESERT AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN			X	SALTON SEA AIR BASIN			X
SOUTH COAST AIR BASIN			X	MOUNTAIN COUNTIES AIR BASIN			X
SAN DIEGO AIR BASIN			X	LAKE COUNTY AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X	LAKE TAHOE AIR BASIN			X
SACRAMENTO VALLEY AIR BASIN			X				

* The area designated for lead is a county or portion of a county.

2003 Area Designations for State Ambient Air Quality Standards HYDROGEN SULFIDE

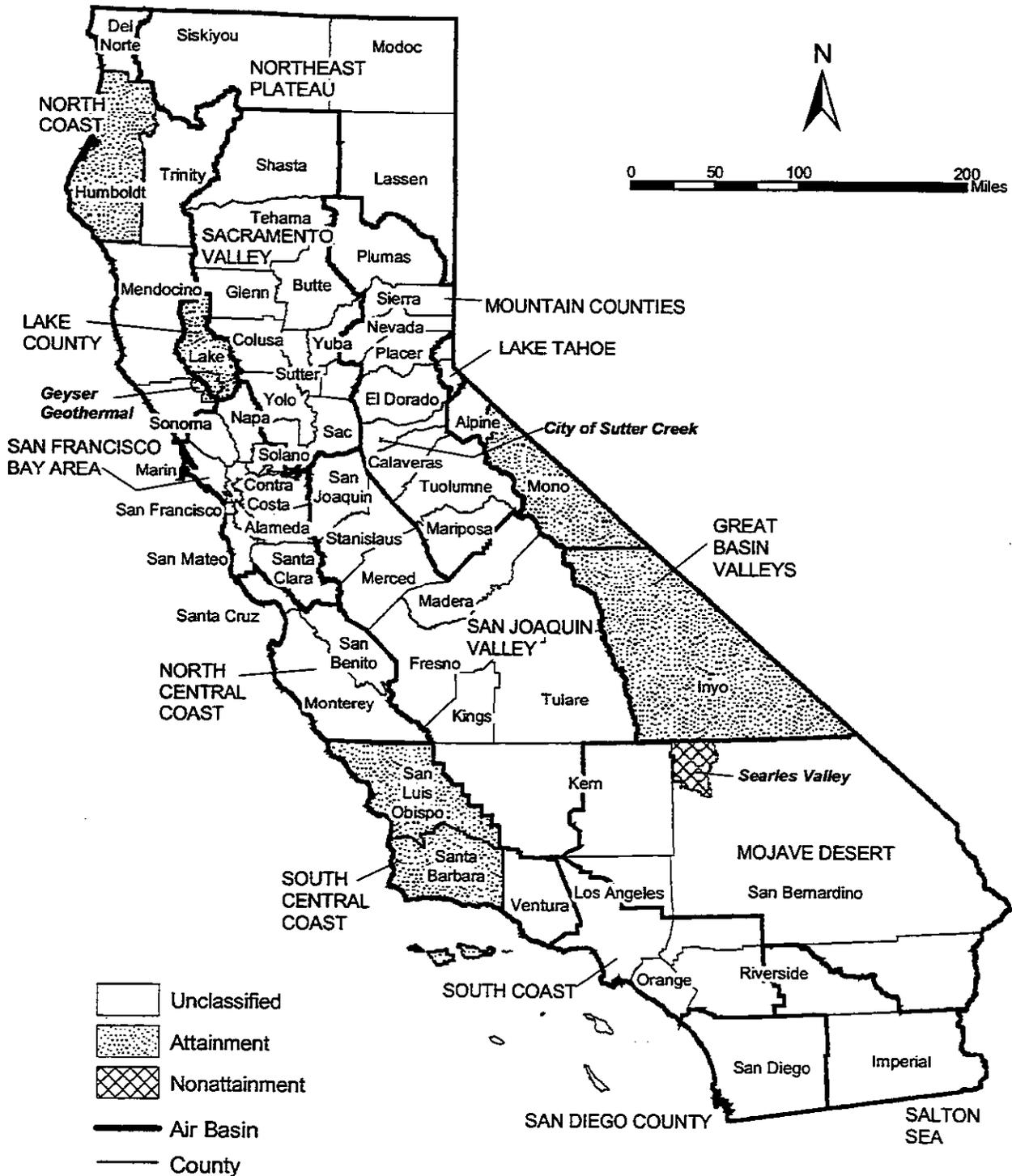


TABLE 8

**California Ambient Air Quality Standards
Area Designations for Hydrogen Sulfide ***

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN (NCAB)					MOJAVE DESERT AIR BASIN (MDAB)				
Del Norte County			X		Kern County (MDAB portion)			X	
Humboldt County				X	Los Angeles County (MDAB portion)			X	
Mendocino County			X		Riverside County (MDAB portion)			X	
Sonoma County (NCAB portion)					San Bernardino County (MDAB portion)				
-Geyser Geothermal Area (1)				X	-Searles Valley Planning Area (2)	X			
-Remainder of County			X		-Remainder of County			X	
Trinity County			X		SALTON SEA AIR BASIN			X	
SAN FRANCISCO BAY AREA AIR BASIN			X		MOUNTAIN COUNTIES AIR BASIN (MCAB)				
NORTH CENTRAL COAST AIR BASIN			X		Amador County				
SOUTH CENTRAL COAST AIR BASIN					-City of Sutter Creek	X			
San Luis Obispo County				X	-Remainder of County			X	
Santa Barbara County				X	Calaveras County			X	
Ventura County			X		El Dorado County (MCAB portion)			X	
SOUTH COAST AIR BASIN			X		Mariposa County			X	
SAN DIEGO AIR BASIN			X		Nevada County			X	
NORTHEAST PLATEAU AIR BASIN			X		Placer County (MCAB portion)			X	
SACRAMENTO VALLEY AIR BASIN			X		Plumas County			X	
SAN JOAQUIN VALLEY AIR BASIN			X		Sierra County			X	
GREAT BASIN VALLEYS AIR BASIN					Tuolumne County			X	
Alpine County			X		LAKE COUNTY AIR BASIN				X
Mono County				X	LAKE TAHOE AIR BASIN			X	
Inyo County				X					

* The area designated for hydrogen sulfide is a county or portion of a county.

(1) California Code of Regulations, title 17, section 60200(d)

(2) 52 Federal Register 29384 (August 7, 1987)

2003 Area Designations for State Ambient Air Quality Standards VISIBILITY REDUCING PARTICLES

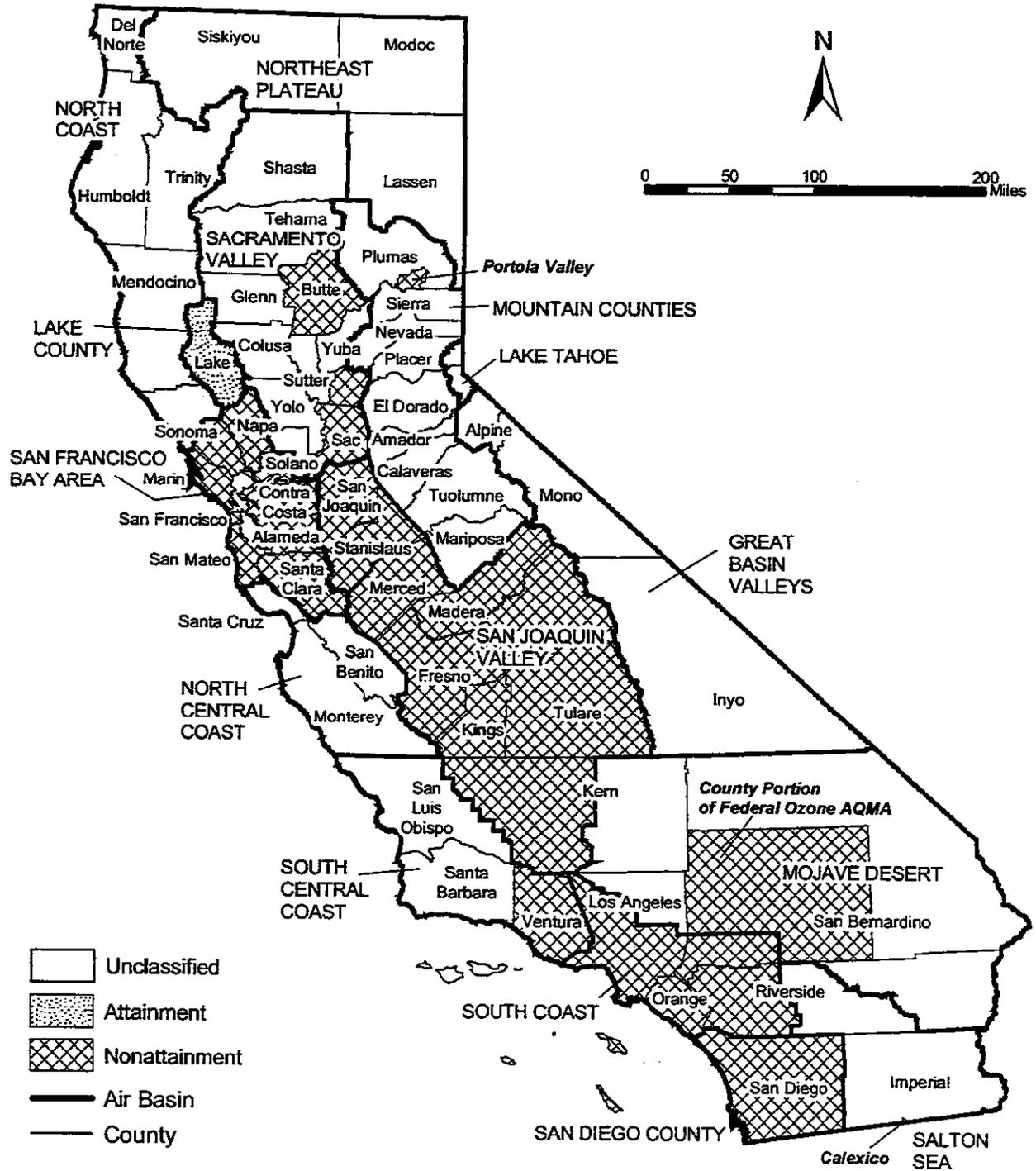


TABLE 9

**California Ambient Air Quality Standards
Area Designations for Visibility Reducing Particles**

	N	NT	U	A		N	NT	U	A
NORTH COAST AIR BASIN			X		SAN JOAQUIN VALLEY AIR BASIN			X	
SAN FRANCISCO BAY AREA AIR BASIN			X		GREAT BASIN VALLEYS AIR BASIN			X	
NORTH CENTRAL COAST AIR BASIN			X		MOJAVE DESERT AIR BASIN			X	
SOUTH CENTRAL COAST AIR BASIN			X		SALTON SEA AIR BASIN			X	
SOUTH COAST AIR BASIN			X		MOUNTAIN COUNTIES AIR BASIN			X	
SAN DIEGO AIR BASIN			X		LAKE COUNTY AIR BASIN				X
NORTHEAST PLATEAU AIR BASIN			X		LAKE TAHOE AIR BASIN			X	
SACRAMENTO VALLEY AIR BASIN			X						

2003 Area Designations for State Ambient Air Quality Standards PM_{2.5}



Source Date:
October 2003
Emission Inventory Branch, PTSD

TABLE 10

**California Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM_{2.5})**

	N	U	A		N	U	A
NORTH COAST AIR BASIN		X		GREAT BASIN VALLEYS AIR BASIN		X	
SAN FRANCISCO BAY AREA AIR BASIN	X			MOJAVE DESERT AIR BASIN			
NORTH CENTRAL COAST AIR BASIN		X		San Bernardino County			
SOUTH CENTRAL COAST AIR BASIN				- County portion of federal Southeast Desert Modified AQMA for Ozone (4)	X		
San Luis Obispo and Santa Barbara Counties (1)		X		Remainder of Air Basin		X	
Ventura County (2)	X			SALTON SEA AIR BASIN			
SOUTH COAST AIR BASIN (3)	X			Imperial County			
SAN DIEGO AIR BASIN	X			- City of Calexico (5)	X		
NORTHEAST PLATEAU AIR BASIN		X		Remainder of Air Basin		X	
SACRAMENTO VALLEY AIR BASIN (SVAB)				MOUNTAIN COUNTIES AIR BASIN			
Butte County	X			Plumas County			
Sacramento County	X			- Portola Valley (6)	X		
Placer County (SVAB portion)	X			Remainder of Air Basin		X	
Remainder of Air Basin		X		LAKE COUNTY AIR BASIN			X
SAN JOAQUIN VALLEY AIR BASIN	X			LAKE TAHOE AIR BASIN		X	

(1) Santa Barbara County includes San Miguel, Santa Barbara, Santa Cruz, and Santa Rosa Islands.

(2) Ventura County includes Anacapa and San Nicolas Islands

(3) South Coast Air Basin portion of Los Angeles County includes San Clemente and Santa Catalina Islands.

(4) California Code of Regulations, title 17, section 60200(b).

(5) California Code of Regulations, title 17, section 60200(a).

(6) California Code of Regulations, title 17, section 60200(c).

Area Designations for the National Ambient Air Quality Standards

This section contains a description of the area designations for each pollutant for which there is a national ambient air quality standard, except lead. The national lead standard was promulgated after the federal Clean Air Act was amended in 1977, and in promulgating the national lead standard, the U.S. EPA did not require areas to be designated in a manner similar to other pollutants. The area designations for each pollutant are presented in the form of a map and a summary table.

The U.S. EPA uses two categories to designate areas with respect to ozone, carbon monoxide, and nitrogen dioxide. These designation categories are:

- Does not meet primary standards, and
- Cannot be classified or better than national standards.

Areas that do not meet the primary national standards for these pollutants are indicated on the following maps and summary tables as "N" for nonattainment. Areas that cannot be classified or are better than the national standards are indicated as "U/A" for unclassified/attainment.

The U.S. EPA uses four categories to designate areas with respect to sulfur dioxide. These designation categories are:

- Does not meet the primary standards,
- Does not meet the secondary standards,
- Cannot be classified, and
- Better than the national standards.

In California, the first two designation categories listed above are not applicable because all areas of California either meet the primary and secondary standards or are unclassifiable. The map and summary table for sulfur dioxide show areas that cannot be classified as "U" for unclassifiable and areas that are better than the national standards as "A" for attainment.

Finally, the U.S. EPA uses two categories to designate areas with respect to suspended particulate matter (PM₁₀). These designation categories are:

- Nonattainment, and
- Unclassifiable.

The map and summary tables for the national PM₁₀ standards indicate "N" for areas designated as nonattainment and "U" for areas that are unclassifiable.

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. The Board generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations for California. For purposes of consistency, all maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by the Board. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, the Board redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Part 81.305. They are available on the web at:

http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr81_00.html

Area designations shown in these maps and tables are based on national standards in existence prior to U.S. EPA's promulgation of a new national 8-hour ozone and new PM2.5 standards in July 1997. Area designations for the new standards are expected to occur in the next several years. Under the federal Clean Air Act, ARB will recommend nonattainment areas and boundaries to the U.S. EPA. The U.S. EPA is then expected to then make the final designations. ARB staff will update these maps and tables to reflect the designations for the new standards as they occur.

Area Designations for National Ambient Air Quality Standards OZONE

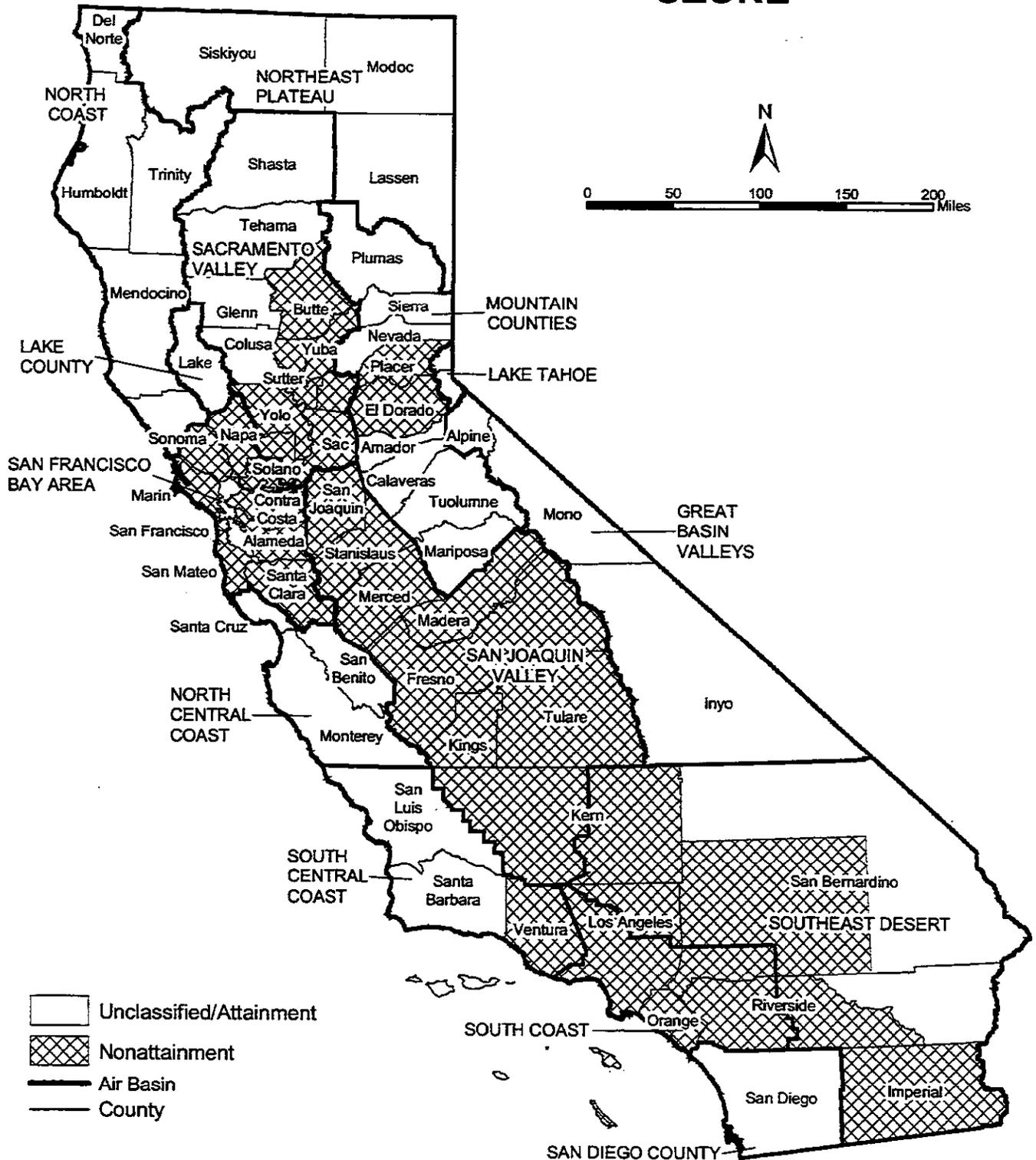


TABLE 11

**National Ambient Air Quality Standards
Area Designations for 1-Hour Ozone***

	N	U/A		N	U/A
NORTH COAST AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN	X	
SAN FRANCISCO BAY AREA AIR BASIN	X		GREAT BASIN VALLEYS AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN (SEDAB)		
SOUTH CENTRAL COAST AIR BASIN			Kern County (SEDAB portion) (1)	X	
San Luis Obispo County		X	Imperial County	X	
Santa Barbara County		X	Los Angeles County	X	
Ventura County (1)	X		Riverside County		
Channel Islands (2)		X	- Non-AQMA portion		X
SOUTH COAST AIR BASIN (2)	X		- Coachella Valley	X	
SAN DIEGO COUNTY		X	San Bernardino County		
NORTHEAST PLATEAU AIR BASIN		X	-Western portion (AQMA)	X	
SACRAMENTO VALLEY AIR BASIN (SVAB)			-Eastern portion (non-AQMA)		X
Butte County (1)	X		MOUNTAIN COUNTIES AIR BASIN (MCAB)		
Colusa County		X	Amador County		X
Glenn County		X	Calaveras County		X
Placer County (SVAB portion)	X		El Dorado County (MCAB portion)	X	
Sacramento County	X		Mariposa County		X
Shasta County		X	Nevada County		X
Solano County (SVAB portion)	X		Placer County (MCAB portion)	X	
Sutter County (north) (1)	X		Plumas County		X
Sutter County (south)	X		Sierra County		X
Tehama County		X	Tuolumne County		X
Yolo County	X		LAKE COUNTY AIR BASIN		X
Yuba County (1)	X		LAKE TAHOE AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) These areas have air quality that meets the 1-hour federal ozone standard. U.S. EPA has proposed a finding of attainment for Ventura County.

(2) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Area Designations for National Ambient Air Quality Standards CARBON MONOXIDE



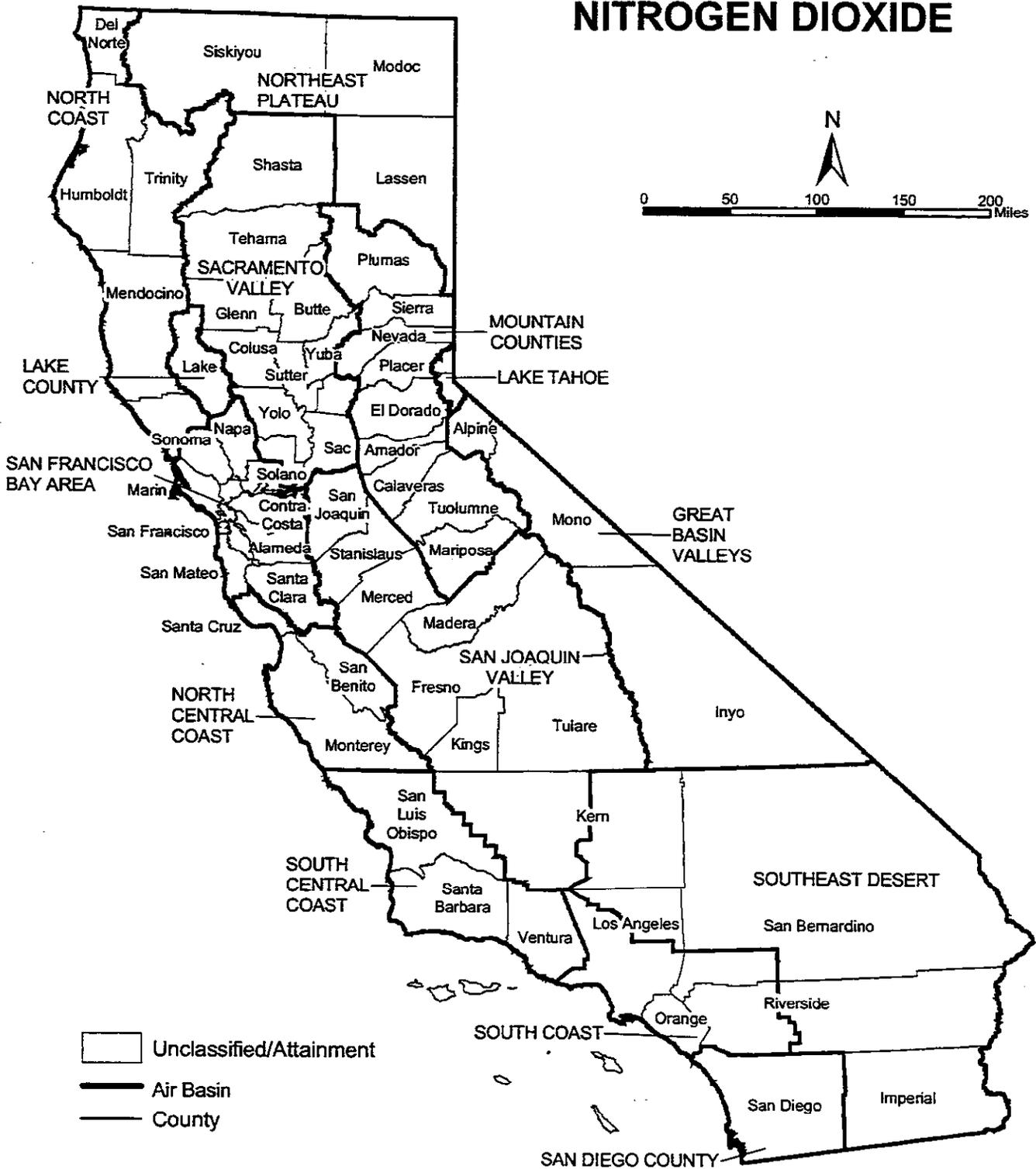
TABLE 12

**National Ambient Air Quality Standards
Area Designations for Carbon Monoxide***

	N	U/A		N	U/A
NORTH COAST AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
SAN FRANCISCO BAY AREA AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	GREAT BASIN VALLEYS AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X
SOUTH COAST AIR BASIN	X		MOUNTAIN COUNTIES AIR BASIN		X
SAN DIEGO COUNTY		X	LAKE COUNTY AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	LAKE TAHOE AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Area Designations for National Ambient Air Quality Standards NITROGEN DIOXIDE



Source Date:
October 2003
Emission Inventory Branch, PTSD

TABLE 13

**National Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide***

	N	U/A		N	U/A
NORTH COAST AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
SAN FRANCISCO BAY AREA AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	GREAT BASIN VALLEYS AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X
SOUTH COAST AIR BASIN		X	MOUNTAIN COUNTIES AIR BASIN		X
SAN DIEGO COUNTY		X	LAKE COUNTY AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	LAKE TAHOE AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Area Designations for National Ambient Air Quality Standards SULFUR DIOXIDE

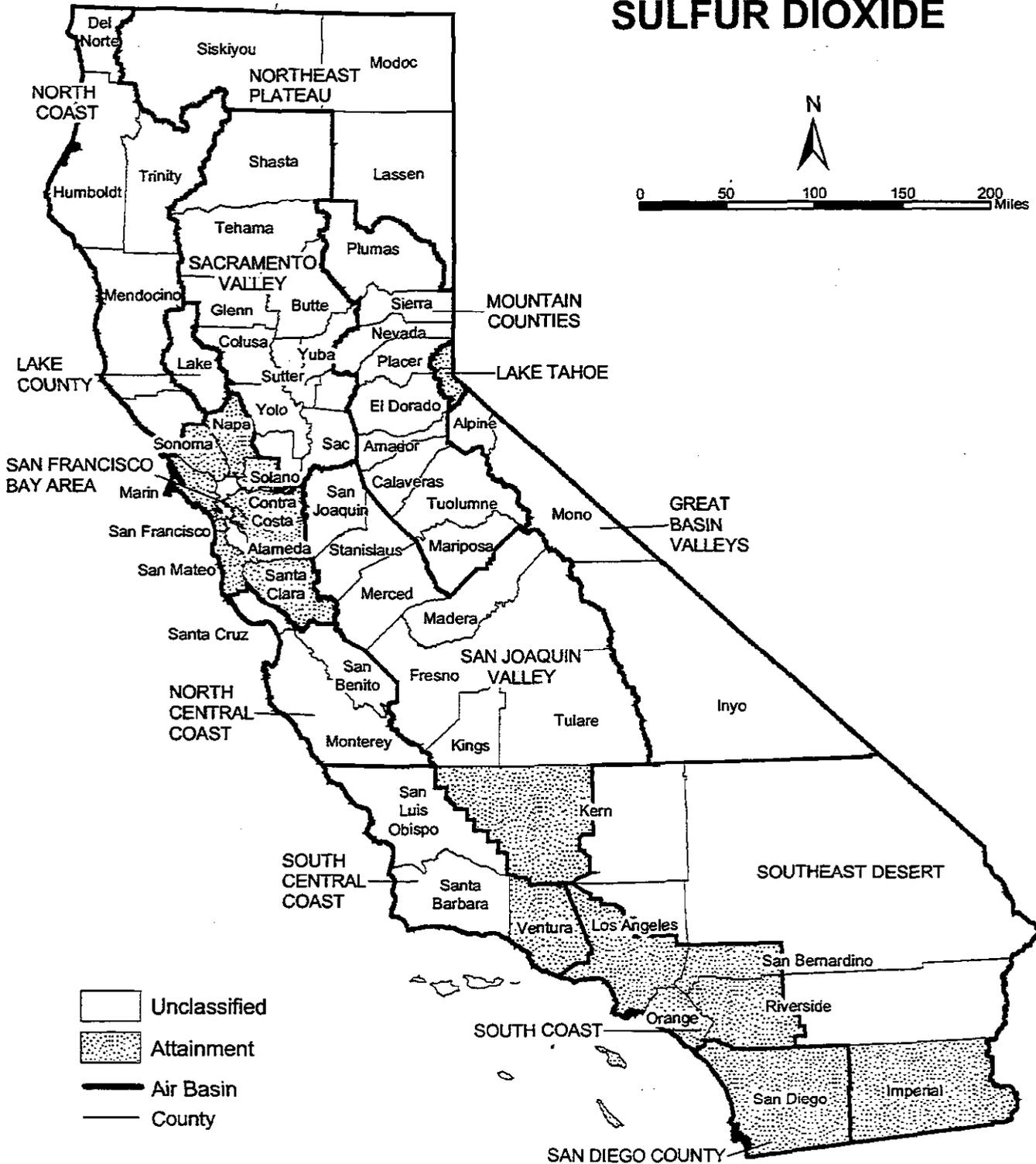


TABLE 14

**National Ambient Air Quality Standards
Area Designations for Sulfur Dioxide***

	A	U		A	U
NORTH COAST AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN (cont.)		
SAN FRANCISCO BAY AREA AIR BASIN	X		Kings County		X
NORTH CENTRAL COAST AIR BASIN		X	Madera County		X
SOUTH CENTRAL COAST AIR BASIN			Merced County		X
San Luis Obispo County		X	San Joaquin County		X
Santa Barbara County		X	Stanislaus County		X
Ventura County	X		Tulare County		X
Channel Islands (1)		X	GREAT BASIN VALLEYS AIR BASIN		X
SOUTH COAST AIR BASIN (1)	X		SOUTHEAST DESERT AIR BASIN		
SAN DIEGO COUNTY	X		Imperial County	X	
NORTHEAST PLATEAU AIR BASIN		X	Remainder of Air Basin		X
SACRAMENTO VALLEY AIR BASIN		X	MOUNTAIN COUNTIES AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN (SJVAB)			LAKE COUNTY AIR BASIN		X
Fresno County		X	LAKE TAHOE AIR BASIN	X	
Kern County (SJVAB portion)	X				

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Area Designations for National Ambient Air Quality Standards PM10



TABLE 15

**National Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM10)***

	N	U		N	U
NORTH COAST AIR BASIN		X	GREAT BASIN VALLEYS AIR BASIN (cont.)		
SAN FRANCISCO BAY AREA AIR BASIN		X	Mono County		
NORTH CENTRAL COAST AIR BASIN		X	-Mammoth Lake Planning Area	X	
SOUTH CENTRAL COAST AIR BASIN		X	-Mono Lake Basin	X	
SOUTH COAST AIR BASIN	X		-Remainder of County		X
SAN DIEGO COUNTY		X	SOUTHEAST DESERT AIR BASIN (SEDAB)		
NORTHEAST PLATEAU AIR BASIN		X	Eastern Kern County		
SACRAMENTO VALLEY AIR BASIN (SVAB)			-Indian Wells Valley		X
Butte County		X	-Remainder of County		X
Colusa County		X	Los Angeles County (SEDAB portion)		X
Glenn County		X	Riverside County		
Sacramento County (1)	X		-Coachella Valley Planning Area	X	
Shasta County		X	-Remainder of County		X
Solano County (SVAB portion)		X	San Bernardino County		
Sutter County		X	-Trona	X	
Tehama County		X	-Remainder of County	X	
Yolo County		X	Imperial County		
Yuba County		X	-Imperial Valley Planning Area	X	
SAN JOAQUIN VALLEY AIR BASIN	X		-Remainder of County		X
GREAT BASIN VALLEYS AIR BASIN			MOUNTAIN COUNTIES AIR BASIN		
Alpine County		X	Placer County (SVAB/MCAB portion) (2)		X
Inyo County			Remainder of Air Basin		X
-Owens Valley Planning Area	X		LAKE COUNTY AIR BASIN		X
-Coso Junction	X		LAKE TAHOE AIR BASIN		X
-Remainder of County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) Sacramento's air quality meets the federal PM10 standards. U.S. EPA is preparing a finding of attainment.

(2) U.S. EPA designation puts the SVAB portion of Placer County in the MCAB.

ATTACHMENT D

***CONVENTION FOR ROUNDING
AMBIENT AIR QUALITY DATA***

ATTACHMENT D

CONVENTION FOR ROUNDING AMBIENT AIR QUALITY DATA

Before ambient air quality measurements are used in designating areas for State standards, they are rounded to the precision of the applicable State standard. In addition, the Expected Peak Day Concentration or EPDC is also rounded to the precision of the State standard before it is used to identify and exclude measurements affected by highly irregular or infrequent events. As described below, the same rounding convention is generally used in all cases.

All raw air quality data are stored in the Board's Aerometric Data Analysis and Management (ADAM) database, as they are reported. However, the reported values and the stored values can and do differ very slightly, because ADAM stores numbers in a floating-point format. For example, a number reported as 1.23 might actually be stored as 1.229999998 or as 1.2300000001. Nonetheless, great care is taken to ensure that these "slight" differences have no impact on calculated values used for area designations.

The precision or given number of decimal places varies for each State standard and depends on how the level of the standard is specified. The given number of decimal places for each State standard and averaging time are summarized in Table D-1.

TABLE D-1
Level and Precision of State Standards

Pollutant	Averaging Time	Level of Standard	Given Number of Decimal Places
Ozone	1-hour	0.09 ppm	2
Carbon Monoxide	1-hour	20 ppm	0
	8-hour (Lake Tahoe)	6 ppm	0
	8-hour (Rest of State)	9.0 ppm	1
PM10	24-hour	50 $\mu\text{g}/\text{m}^3$	0
	Annual	20 $\mu\text{g}/\text{m}^3$	0
PM2.5	Annual	12 $\mu\text{g}/\text{m}^3$	0
Nitrogen Dioxide	1-hour	0.25 ppm	2
Sulfur Dioxide	1-hour	0.25 ppm	2
	24-hour	0.04 ppm	2
Lead	30-day	1.5 $\mu\text{g}/\text{m}^3$	1
Sulfates	24-hour	25 $\mu\text{g}/\text{m}^3$	0
Hydrogen Sulfide	1-hour	0.03 ppm	2

Individual air quality measurements and statistics (air quality values) are generally rounded up or down using the digit just beyond the given number of decimal places and according to standard rounding conventions. Air quality values that are below 5 round down, while those that are equal to or greater than 5 round up. For example, if the given number of decimal places is 1, an air quality value of 2.34567 rounds to 2.3 because 0.04567 is less than 0.05. An air quality value of 2.35012 rounds to 2.4 because 0.05012 is greater than 0.05. Similarly, an air quality value of 2.35000 rounds to 2.4 because 0.05000 exactly equals 0.05.

The method used for determining area designation values is generally consistent across all pollutants. First, if there is a valid EPDC, the EPDC is rounded to the given number of decimal places (refer to Table D-1) for the applicable State standard. Next, all air quality values for the three-year period used in area designations are rounded to the given number of decimal places. All air quality values that are higher than the valid EPDC are excluded as extreme concentration events, and therefore, not considered in the area designation process. The air quality value used to designate an area (the designation value) is the highest rounded value for the previous three-year period that is less than or equal to the rounded EPDC. However, if this air quality value is identified as affected by an exceptional event or unusual concentration event, it is excluded from the area designation process and the next highest air quality value becomes the designation value.

ATTACHMENT E

***PROCEDURE FOR DESIGNATING AN AREA WITH RESPECT TO
THE STATE PARTICULATE MATTER STANDARDS (PM10 AND PM2.5)***

ATTACHMENT E

PROCEDURE FOR DESIGNATING AN AREA WITH RESPECT TO THE STATE PARTICULATE MATTER STANDARDS (PM10 AND PM2.5)

INTRODUCTION

In June 2002, the Air Resources Board (ARB, Board) established a new State annual standard for particulate matter with a diameter of 2.5 microns or less (PM2.5) and lowered the level of the existing State annual standard for particulate matter with a diameter of 10 microns and smaller (PM10). In addition, the ARB revised the averaging method for the State annual PM10 standard from an annual geometric mean to an annual arithmetic mean. The annual arithmetic mean also applies to the State PM2.5 standard. These State standards became effective July 5, 2003. The Board also approved a list of PM10 and PM2.5 samplers that, for the first time, includes continuous monitors for use in determining compliance with particulate matter (PM) standards. This document describes the procedure ARB staff followed for designating areas with respect to the new State PM2.5 standard and revised State PM10 standards.

BACKGROUND

State ambient air quality standards for particulate matter consist of three elements – the pollutant, the averaging time, and the level or concentration not to be exceeded. When a measured PM concentration averaged over the specified averaging time period is above the level of the standard, the area experiences an “exceedance” of the standard. Whether or not an exceedance is identified as a “violation” is determined through the attainment test. The attainment test is not established as part of the standard setting process, but as part of the State area designation process. Table E-1 shows each of the current State PM standards, with the levels expressed as micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

TABLE E-1
Comparison of State PM Standards

Pollutant	PM10		PM2.5
Averaging Time	24 hour	Annual	Annual
Level	50 µg/m ³	20 µg/m ³	12 µg/m ³
Attainment Test	<ul style="list-style-type: none"> Identify the highest 24-hour concentration in an area in the previous three years that is not excluded as an extreme, exceptional, or unusual concentration event. Extreme concentration events are identified through a statistical calculation. Compare to the level of the standard. 	<ul style="list-style-type: none"> Calculate the arithmetic annual average concentrations for the previous three years. The annual average is calculated as an average of quarters.¹ Compare to the level of the standard. 	<ul style="list-style-type: none"> Calculate the arithmetic annual average concentrations for the previous three years. The annual average is calculated as an average of quarters.¹ Compare to the level of the standard.

1. Extreme, exceptional, or unusual concentration events do not generally significantly influence the annual average. However, their exclusion can be considered on a case-by-case basis.

STATE AREA DESIGNATIONS

Section 39608 of the Health and Safety Code requires ARB to establish and annually review area designations for the State standards. These designations are intended to notify the public about air quality in the areas where they live, work, play, or travel. This is accomplished by designating areas as nonattainment, attainment, and unclassified. The nonattainment designation identifies a region with unhealthy air. There is a subcategory of the nonattainment designation called nonattainment–transitional that, in the case of PM, only applies to the 24-hour PM10 standard. Areas that are making progress towards attainment of this standard are designated as nonattainment-transitional. Areas with adequate PM monitoring data that do not violate the standards are considered to have healthful air and are designated as attainment. Areas without adequate PM monitoring data are designated as unclassified.

A. Process to Identify Nonattainment and Attainment Areas

State area designations are based on air quality data measured at each monitoring site within the area under consideration. California approved samplers used at PM

monitoring sites include the PM₁₀ and PM_{2.5} Federal Reference Methods (FRMs) and a series of continuous PM samplers. FRMs provide filter-based 24-hour measurements of ambient PM concentrations, while continuous monitors provide hourly measurements of PM concentrations. The list of approved PM monitors, methods, and samplers is provided in the California Code of Regulations (CCR), title 17, section 70100. Because the Board approved multiple monitors during the standard setting process, the data used for area designations will represent the highest value from any approved monitor operating at a site. Therefore, designation values may be based on data from different types of monitors at different sites. Moreover, in some cases, the 24-hour PM₁₀ and the annual average PM₁₀ designation values may be derived from two different monitors at the same site.

In determining the 2003 area designations, ARB staff used data on ambient PM concentrations that were collected by the districts and ARB from 2000 to 2002 for each of the PM monitoring sites across California. This included data from over 180 PM₁₀ FRMs, over 90 PM_{2.5} FRMs, and approximately 15 PM_{2.5} continuous samplers. Since the installation of PM₁₀ continuous California approved samplers started only recently, no continuous PM₁₀ data were used.

The monitoring methods adopted simultaneously with the new State PM standards require that PM concentrations be reported at local temperature and pressure conditions. In contrast, previous monitoring methods required PM₁₀ concentrations to be reported under standard temperature and pressure conditions (25°C and 760 torr). The temperature and pressure conditions were changed from standard to local to be consistent with the current federal PM_{2.5} standard and with expected changes to future federal PM standards. Because of the transition period between monitoring methods, data under local conditions are not available for all sites at this time. Therefore, for area designations, we used data reported under local conditions for some sites and data reported under standard conditions for other sites. In our experience, however, PM concentrations reported under standard conditions are not significantly different from those reported under local conditions for monitors located at an elevation under 1000 feet. Analysis of data at higher elevation sites indicated that using standard condition data did not have an impact on this year's area designations.

To determine which air quality monitors either attain or do not attain the PM standards, we conducted the analysis described below. We analyzed the data from each monitor separately. In other words, data were not combined from different monitors located at the same site.

B. Annual PM Standards

1. We evaluated the data for representativeness as described in Appendix 1 to CCR, title 17, sections 70300 through 70306. The specific representativeness criteria differ for continuous samplers and 24-hour samplers. The State representativeness and completeness criteria are different from the federal criteria and are more stringent. In general, the State criteria consider an air quality statistic to be representative if at least 75 percent of each of the short-term values required to represent the averaging time of the standard are available.

- A representative annual statistic must have four representative quarters. All measurements collected at a site are included in the annual average.
- A quarter is considered representative if it includes three representative months.
- A month is representative when it includes data for 75 percent of the scheduled sampling days. For example, if FRM sampling is scheduled every sixth day, in a 31 day month 5 or 6 samples are expected, depending on which day of the month sampling starts. Therefore, a minimum of 4 or 5 samples, respectively, would make a representative month. Continuous samplers provide data to estimate 24-hour daily average PM concentrations. In this case at least 23 daily averages constitute a representative month (75% of 31 days).
- A day is representative if there is 75% completeness within each of the three 8-hour periods of the day. Each representative day includes a minimum of 18 hourly samples, with at least 6 samples in each of the three periods (12 a.m. until 8 a.m., 8 a.m. until 4 p.m., and 4 p.m. until 12 a.m.) and no more than two consecutive hourly measurements missing.

2. For each California approved sampler, we calculated the annual average PM concentrations for 2000, 2001, and 2002. The annual average is a simple average of the quarterly averages. This approach is consistent with the federal method described in Appendix N to Code of Federal Regulations (CFR), Title 49, Chapter I, Part 50 for filter-based FRM data. For continuous data, we first calculated 24-hour average values. Then, we estimated quarterly averages from the 24-hour values. Finally, we averaged the quarterly estimates. The procedure is described below:

- We entered monitoring data into a computer database maintaining one decimal place more than the concentration specified in the standard. For example, the annual PM_{2.5} standard is 12 $\mu\text{g}/\text{m}^3$, so hourly values in the database are truncated at xx.x $\mu\text{g}/\text{m}^3$.
- We calculated 24-hour averages using midnight-to-midnight hourly data sampled with continuous monitors. This is consistent with filter-based FRM samplers which collect 24-hour samples from midnight-to-midnight.

- When calculating quarterly and annual averages, we maintained all available digits and decimal places.
 - We then rounded the annual averages to the nearest integer, which is consistent with the precision of the State standard. For example, $12.49 \mu\text{g}/\text{m}^3$ rounds down to $12 \mu\text{g}/\text{m}^3$ and $12.50 \mu\text{g}/\text{m}^3$ rounds up to $13 \mu\text{g}/\text{m}^3$.
3. Finally, we compared each annual average to the level of the corresponding annual PM standard:

Nonattainment

- An area is nonattainment for the State annual **PM2.5** standard if the calculated representative PM2.5 annual concentration at any site during any of the three years is $13 \mu\text{g}/\text{m}^3$ or higher.
- An area is nonattainment for the State annual **PM10** standard if the calculated representative annual PM10 concentration at any site during any of the three years is $21 \mu\text{g}/\text{m}^3$ or higher.

Attainment

Under the criteria for determining data completeness

An area is attainment for the State annual **PM2.5** standard if:

- The calculated maximum representative annual PM2.5 concentration for any site in the area during each of the three years is equal to or less than $12 \mu\text{g}/\text{m}^3$, or
- The calculated annual PM2.5 concentrations are representative for only two years and the maximum concentration for any site in the area is equal to or less than $9 \mu\text{g}/\text{m}^3$ (less than three-fourths of the level of the standard), or
- The calculated annual PM2.5 concentrations are representative for only one year and the maximum concentration at any site is equal to or less than $6 \mu\text{g}/\text{m}^3$ (less than one-half of the level of the standard).

An area is attainment for the annual average **PM10** standard if:

- The calculated maximum representative annual PM10 concentration for any site in the area during each of the three years is equal to or less than $20 \mu\text{g}/\text{m}^3$, or
- The calculated annual PM10 concentrations are representative for only two years and the maximum concentration for any site in the area is equal to or less than $15 \mu\text{g}/\text{m}^3$ (less than three-fourths of the level of the standard), or

- The calculated annual PM10 concentrations are representative for only one year and the maximum concentration at any site is equal to or less than $10 \mu\text{g}/\text{m}^3$ (less than one-half of the level of the standard).

C. 24-Hour PM10 Standard

The 24-hour State PM10 standard remains the same, and the procedures for designating areas as attainment and nonattainment basically remain unchanged. However, as we do for the State annual average PM10 standard, we now equally analyze PM10 data collected at the primary PM10 FRM and at all collocated PM10 FRMs operating at each monitoring site. The Board approved list of PM10 monitors now also includes continuous samplers for use in determining compliance with State PM10 standards. When these continuous data become available, we will consider data from multiple monitors for determining area designations, as we do for the State annual PM2.5 standard. In contrast to the annual average, data identified as affected by highly irregular or infrequent events (extreme concentration, exceptional, and unusual concentration events) are excluded from the dataset before comparing concentrations to the State 24-hour standard (refer to Appendix 2 to CCR, title 17, sections 70300 through 70306). In identifying data affected by highly irregular or infrequent events, we consider data from each monitor separately. In other words, data from different monitors at the same site are not "mixed and matched."

D. Criteria for Establishing Area Designation Boundaries

The area designation criteria (CCR, title 17, section 70302) specify that the geographic extent of designated areas for PM10 and PM2.5 will be an air basin. However, these criteria allow the State to consider factors such as air quality data, meteorology, topography, or the distribution of population or emissions in determining areas smaller than an air basin.

In determining appropriate boundaries for designated areas, we considered geography and meteorology, the extent of urban areas, transportation corridors, the location of emission sources, and existing political jurisdictions. The resulting areas consider the following broad principles.

PM10 Designation Areas

- Retain the same boundaries as the existing PM10 attainment and nonattainment areas. These are primarily air basins, with exceptions in the Mountain Counties Air Basin (MCAB), where counties and the Yosemite National Park constitute smaller nonattainment areas. The split of the MCAB is based on the distinct effects that possible pollutant transport from the Sacramento and San Joaquin valleys may have on the western portions of many of these counties due to the MCAB's topography and meteorology. The Yosemite National Park is a distinct nonattainment area based on supplemental air quality data and unique topography and meteorology.

PM2.5 Designation Areas

- Designate air basin where appropriate.
- Designate smaller areas within the air basin when significant differences among the areas exist. Differences might include topography, the extent of urban areas, transportation corridors, and the location of emission sources. Boundaries would be based on county, district, or city boundaries, pre-existing State and federal nonattainment area boundaries for related pollutants (for example, ozone or PM10), or distinct geographic features.

ATTACHMENT F

BIBLIOGRAPHY

ATTACHMENT F**BIBLIOGRAPHY**

The following is a list of the documents the staff used in developing the changes to the designation criteria and area designations for State standards documented in this staff report:

1. Classification of Areas of the State as Attainment, Nonattainment, and Unclassified for State Ambient Air Quality Standards for the California Clean Air Act of 1988, California Air Resources Board, April 1989.
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