

**PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT**

Draft Staff Report

**Implementation of SB 656
Measures to Reduce Particulate Matter**

**PREPARED IN COMPLIANCE WITH
SENATE BILL 656**

MAY 2005

BACKGROUND

In 2003, the California Legislature enacted Senate Bill 656 (SB 656, Sher), codified as Health and Safety Code (H&SC) section 39614, to reduce public exposure to particulate matter. The goal is to make progress toward attainment of federal and state respirable particulate matter (PM10) and fine particulate matter (PM2.5) standards. As the first step, SB 656 requires the California Air Resource Board (CARB), in consultation with local air districts, to develop a list of the most readily available, feasible, and cost-effective control measures that could be employed by CARB and local air districts to reduce PM10 and PM2.5 (collectively referred to as PM) emissions. To meet this requirement, CARB staff has developed a list of control measures based on rules, regulations, and programs existing in California as of January 1, 2004. The CARB adopted this list of measures in November 2004.

The Bill also requires each local air district to adopt an implementation schedule by July 31, 2005 and appropriate control measures to reduce particulate matter pollution. In developing the implementation schedule, H&SC section 39614 (d)(2) specifically requires each air district to prioritize measures that the air district is considering from the CARB list based on the effect individual measures will have on public health, air quality, emission reductions, and cost-effectiveness. Air districts must adopt an implementation schedule for applicable measures at a noticed public meeting and after at least one public workshop. The implementation schedule should identify the selected subset of measures, and the dates for final adoption, implementation, and sequencing of selected control measures. Finally, no later than January 1, 2009, the CARB must prepare a report describing the actions taken to fulfill the requirements of the legislation as well as recommendations for further actions to assist in achieving the State PM standards. The bill requirements sunset on January 1, 2011, unless extended.

HEALTH EFFECTS OF PARTICULATE MATTER

Particulate matter in the air is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles which are 10 microns or less in diameter are defined as "respirable particulate matter" or PM10. These particles (PM 10 and smaller) pose the greatest health concern because they can pass deep into the lungs. Particles which are 2.5 microns or less in diameter are defined as "fine" particulate matter or PM2.5. In addition to adverse health concerns, these fine particles can contribute significantly to regional haze and reduction of visibility in California.

Since the small particles that make up PM can easily penetrate deep into the lungs, scientists have studied the effects of this type of pollution on human health. Both short and long-term exposures to PM have been shown to lead to harmful health effects. People with heart or lung diseases, older adults, and children are more at risk to the adverse health effects from PM exposure. In addition, scientists have observed higher rates of hospitalizations, emergency room visits and doctor's visits for respiratory illnesses or heart disease during times of high PM concentrations. During these periods of high PM levels, scientists also observed the worsening

of both asthma symptoms and acute and chronic bronchitis. Scientists have found a relationship between high PM levels and reductions in various aspects of the healthy functioning of people's lungs.

The elderly and people with existing heart and/or lung disease are particularly at risk to the harmful effects from PM exposure. Data from CARB's Children's Health Study shows similar harmful health effects in children, as well. This study demonstrated that in communities highly polluted with PM, children's lungs developed more slowly and did not move air as efficiently as children's lungs in clean air communities. Children and infants are susceptible to harm from inhaling pollutants such as PM because they inhale more air per pound of body weight than do adults, they breathe faster, spend more time outdoors and have smaller body sizes. In addition, children's immature immune systems may cause them to be more susceptible to PM than healthy adults. Further research may clarify the relationship between PM exposure and children's health.

ASSESSMENT OF AMBIENT PM10 AND PM2.5 IN PLACER COUNTY

Ambient PM can be classified into two groups; primary PM that is directly emitted from sources such as vehicle travel on paved and unpaved roads, forest management burning, agriculture burning, residential wood burning stoves/fireplaces, and combustion process; and secondary PM that is formed in the air from the reactions of precursor gases such as nitrogen oxides, volatile organic compounds, sulfur oxides, and ammonia.

Extensive research indicates that short-term and long-term exposure to PM above U.S. EPA and CARB ambient air quality standards could lead to adverse health effects. Current federal and State PM standards are shown in Table 1.

**Table 1
 Federal and State Ambient Air Quality Standards for PM**

Pollutant	Averaging Time	California	Federal
Respirable Particulate Matter (PM10)	24 hour	50 ug/m ³	150 ug/m ³
	Annual Arithmetic Mean	20 ug/m ³	50 ug/m ³
Fine Particulate Matter (PM2.5)	24 hour	No Separate State standard	65 ug/m ³
	Annual Arithmetic Mean	12 ug/m ³	15 ug/m ³

Placer County is divided into three different air basins: Sacramento Valley Air Basin (SVAB), Mountain Counties Air Basin (MCAB), and the Lake Tahoe Air Basin (LTAB). Each air basin has its own meteorological and geographic conditions. The following sections of this report will assess current ambient PM10 and PM2.5 conditions and the attainment status within each air basin.

Ambient PM Concentration in the Placer County portion of Sacramento Valley Air Basin

The SVAB portion of Placer County extends from the Sacramento/Placer County line to just east of the City of Auburn. This area is located at the base of the foothills of the Sierra Nevada Mountain Range, with terrain that varies from flat to low rolling hills. Approximate 85% of the population of Placer County is within this area.

The charts below show the annual average and maximum 24-hour ambient PM concentration within the Placer County portion of the SVAB. The Roseville, Lincoln, and Auburn monitoring sites record ambient air quality data for this portion of the SVAB. The Roseville monitoring site is operated by the CARB to monitor both PM10 and PM2.5 (among other pollutants) ambient concentration. The Lincoln and Auburn monitoring sites are operated by the District and currently monitor PM10 ambient concentrations, not PM2.5. Based on the ambient PM concentrations measured, the Placer County portion of the SVAB is currently designated as attainment for the federal PM10 and PM2.5 standards and as non-attainment for State PM10 and PM2.5 standards.

Figure 1

PM10 Concentrations at Roseville Site

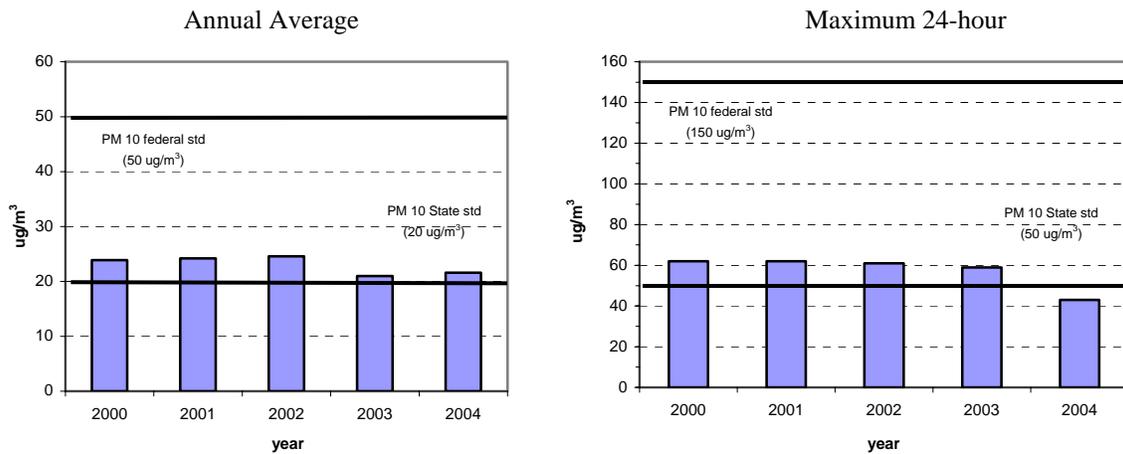


Figure 2

PM2.5 Concentrations at Roseville Site

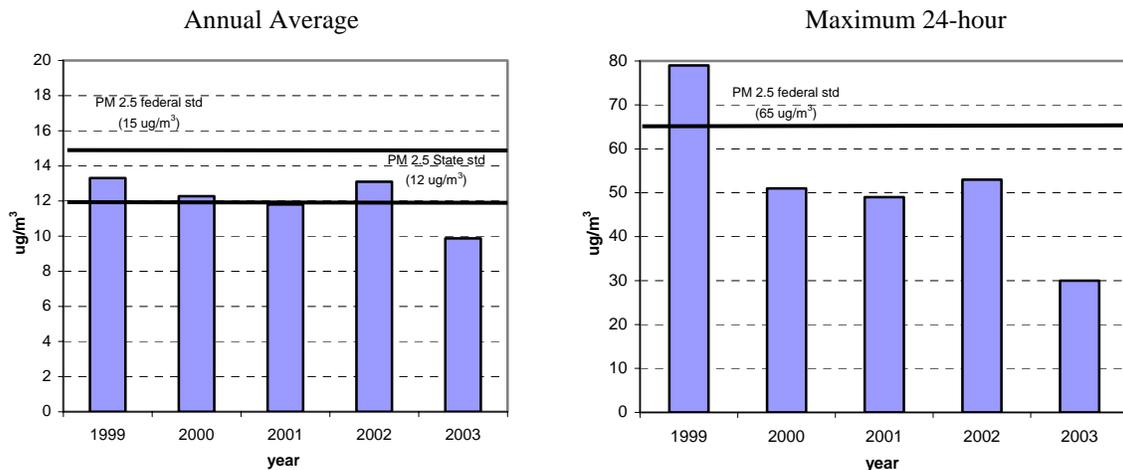


Figure 3
PM10 Concentrations at Lincoln Site

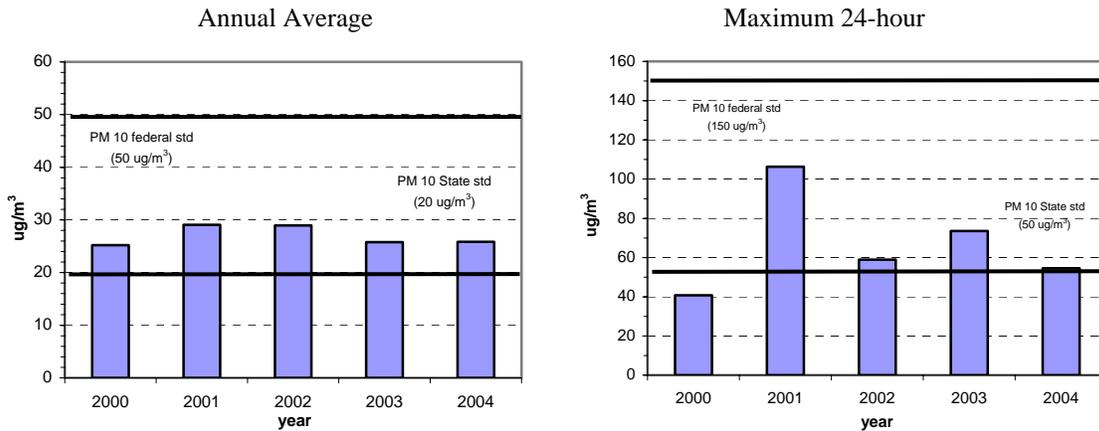
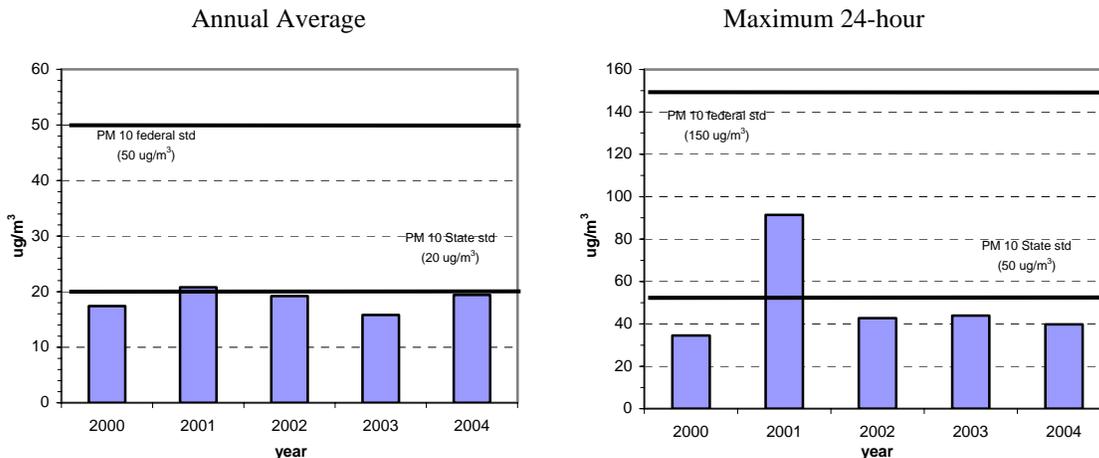


Figure 4
PM10 Concentrations at Auburn Site

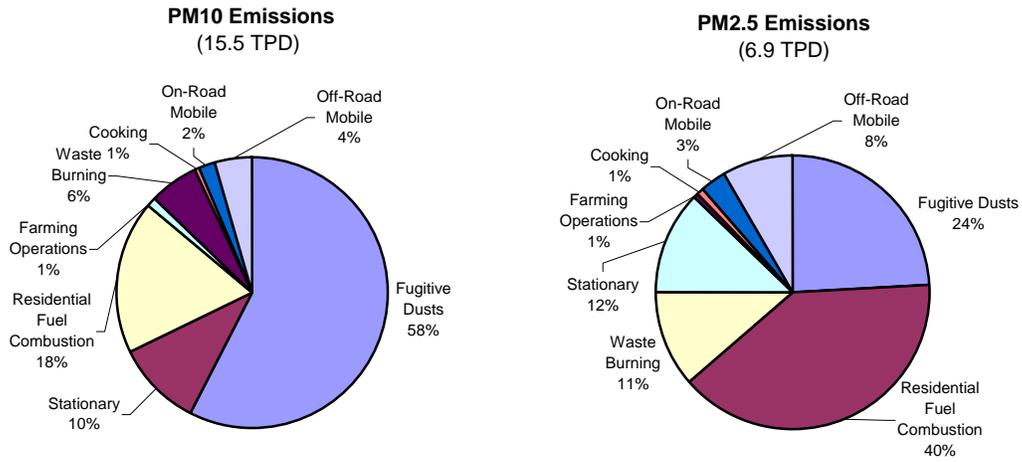


Seasonal Variations in Placer County Portion of Sacramento Valley Air Basin

In the Placer County portion of SVAB, there is a seasonal variation in PM concentration, with higher PM10, and PM2.5 concentrations in the fall and winter months. In the winter, increased activities for some emission sources (e.g. wood-burning stoves and fireplaces) and meteorological conditions (e.g. moist and cooler air) are conducive to the buildup of PM. PM10 and PM2.5 concentrations can remain elevated for extended periods. The figures on the next page show the monthly average PM10 and PM2.5 concentrations at the Roseville site and the monthly average PM10 concentrations at the Lincoln and Auburn sites in 2003.

Based on chemical speciation analysis conducted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), a major contributor to high levels of both PM10 and PM2.5 in the SVAB in the winter is due to wood smoke from residential fireplaces and charbroiler cooking at restaurants. In addition, the formation of nitrates and sulfates, which are secondary

Figure 7
Placer County 2004 PM Emissions Inventory in SVAB

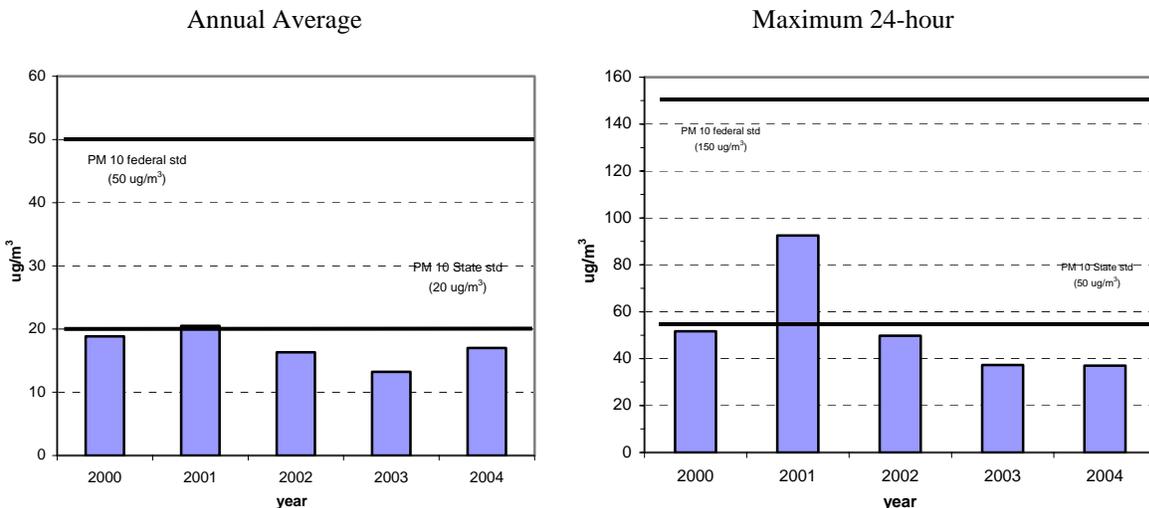


In the Placer County portion of SVAB, fugitive dust and residential fuel combustion are two major sources of PM10 and PM2.5 emissions. In general, combustion processes form fine particles, whereas emissions from dust sources tend to be coarse particles. The estimate of PM10 and PM2.5 daily emissions is 15.5 tons per day and 6.9 tons per day, respectively.

Ambient PM Concentration in Placer County portion of the Mountain Counties Air Basin

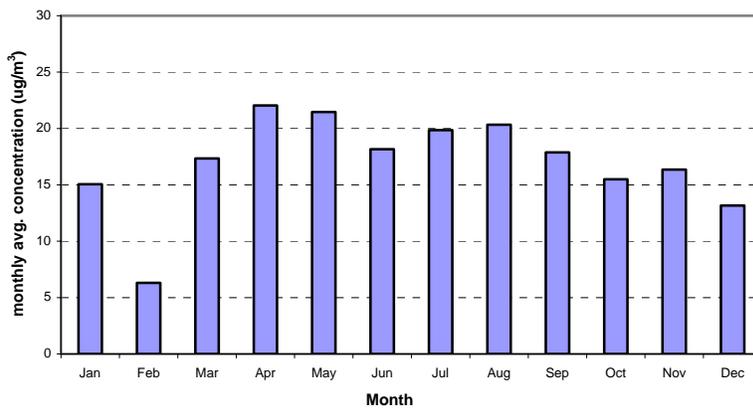
The MCAB extends from just east of the City of Auburn to the Lake Tahoe basin. The charts below show the annual average and maximum 24-hour ambient PM concentration measurements at the Colfax monitoring site. The Colfax monitoring site is operated by the District to monitor PM10 ambient concentrations within the Placer County portion of the MCAB. Currently, the Placer County portion of MCAB is classified as attainment of federal PM standards and non-attainment for the State PM10 standards.

Figure 8
PM10 Concentrations at Colfax Site



The monitoring data suggests that there is a seasonal variation in PM concentrations at the Colfax monitoring site, with higher PM₁₀ concentrations corresponding generally during the ozone season, or between April and August. The Colfax site is located at the west end of the MCAB portion of the County, and is very close to the boundary with the SVAB. The transport of particulate matter and its precursors from the Sacramento Valley and the San Francisco Bay Area by prevailing winds, combined with unfortunate local meteorological conditions in the MCAB, could be factors leading to the higher PM during the summer months at this location. However, without speciation data, it is not possible to be more precise in identifying the major sources responsible for the PM concentrations in this portion of the MCAB. The District will have to rely on the emission inventory for the MCAB to estimate the major source categories contributing to these exceedances of the State standard. Figure 9 indicates the monthly PM₁₀ average concentration at the Colfax monitoring site during 2004.

Figure 9
Monthly Average PM₁₀ Concentrations
at Colfax Site in 2004



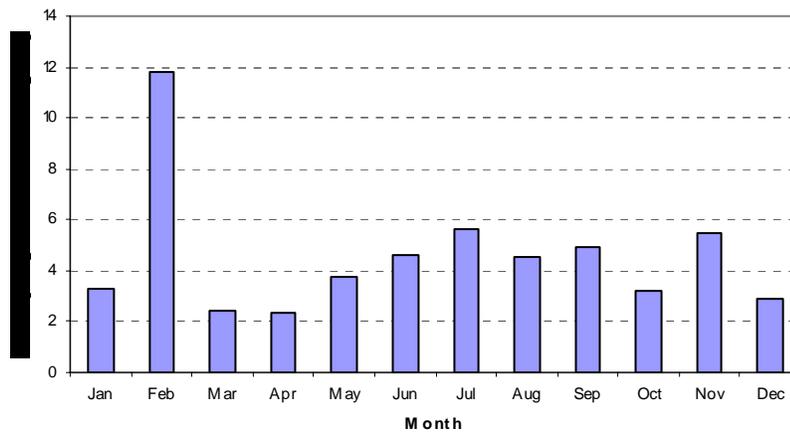
Emission Sources of PM in the Placer County Portion of the Mountain Counties Air Basin

Sources of PM emissions include combustion sources such as trucks and passenger cars, residential wood burning, off-road equipment, industrial processes, forest management and residential backyard burning; fugitive dust from construction and demolition, vehicle travel on paved and unpaved roads, mining and agricultural activities; and ammonia from sources such as livestock operations, fertilizer application, and composting. An average daily emission inventory for directly emitted PM₁₀ and PM_{2.5} in the MCAB is summarized in the following pie charts.

Seasonal Variations in the Placer County Portion of the Lake Tahoe Air Basin

At the Tahoe City monitoring site, the 2003 data suggests that with the exception of February's average concentrations, there may not be clear seasonal variations of PM concentrations within the Placer County portion of the LTAB. The cooler, stagnant conditions during the winter months coinciding with increased activity from residential wood burning could be responsible for the buildup of PM concentrations during these months. During the spring and summer months, forest management burning, increased tourism activity and boating may be responsible for the increased PM concentrations. The figure below shows the monthly PM_{2.5} average concentration at the Tahoe City monitoring site during 2003.

Figure 11
Monthly Average PM_{2.5} Concentrations
at Tahoe City in 2003



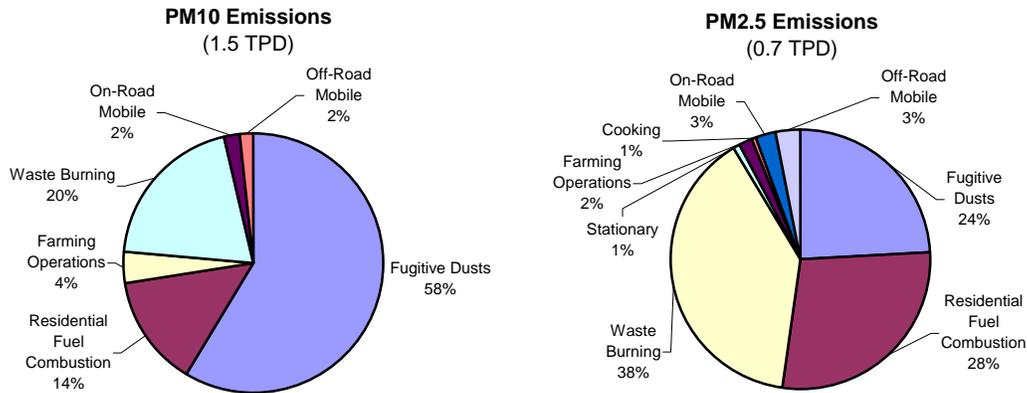
Emission Sources of PM in Lake Tahoe Air Basin Portion of Placer County

Sources of PM emissions include combustion sources such as vehicle exhaust, residential wood burning, off-road equipment, forest management and residential backyard burning; fugitive dust from construction and demolition, travel on paved and unpaved roads, mining and agricultural activities; and ammonia from sources such as livestock operations, fertilizer application, and composting.

In the Placer County portion of LTAB, fugitive dust, residential backyard burning, and residential fuel combustion are the major sources for PM₁₀ and PM_{2.5} emissions. The estimate of PM₁₀ and PM_{2.5} daily emissions is 1.5 tons per day and 0.7 tons per day, respectively. An average daily emission inventory for directly emitted PM₁₀ and PM_{2.5} is summarized in the following pie charts.

Figure 12

Placer County 2004 PM Emissions Inventory in LTAB



PM CONTROL MEASURE LIST DEVELOPMENT

As required by Senate Bill 656, CARB approved a list of the most readily available, feasible, and cost-effectiveness control measures that can be employed by air districts to reduce PM at their November 18, 2004 Boarding meeting. This list is based on rules, regulations, and programs existing in California as of January 1, 2004 for stationary, area-wide, and mobile sources.

SB656 requires air districts to adopt implementation schedules for selected measures from the CARB list by July 31, 2005. The implementation schedules will identify the appropriate subset of measures, and the dates for final Board consideration, implementation, and the sequencing of selected control measures. In developing the implementation schedules, each air district will prioritize measures based on public health, air quality, emission reduction, and cost-effectiveness. Consideration is also given to ongoing programs such as measures being adopted to meet national air quality standards or the State ozone planning process.

PROCESS OF EVALUATING POTENTIAL CONTROL MEASURES

District staff have evaluated the emission benefits and cost effectiveness of the various measures from the recommended list of measures that was adopted by CARB in November 2004. This adopted list of control measures, with estimated cost-effectiveness, is included in Attachment A. The list of control measures approved by CARB focused on wood burning, fugitive dust, agricultural operations that are the sources directly emitting PM and additional measures for combustion sources and coating operations to control PM precursors. It is important to recognize that cost-effectiveness and feasibility will vary depending upon the number, size, and configuration of sources within each air district jurisdiction and the contribution of that source to local PM concentrations.

Many of the control measures that were included on the CARB recommended list have already been adopted by the District or there are no significant sources in the County. The evaluation of each control measure recommended by CARB is included in Attachment A. Based on the District's evaluation of these measures, there are several measures recommended by CARB that should be considered by the District to further reduce PM emissions in Placer County. The prioritized list of control measures is included in Attachment B.

District staff will continue the process of identifying significant sources of PM, evaluate the effects of seasonal and meteorological variations on PM concentrations, and study the emission profiles and monitoring data to identify the appropriate PM10 and PM2.5 control measures that are needed to protect the health and welfare of Placer County residents.

ATTACHMENT A
CARB POTENTIAL SB656 CONTROL MEASURES
&
District Comments

SB656 List of Air District Measures that Reduce Particulate Matter

Strategy	Description	Estimated Cost-Effectiveness (\$/ton)	District Comments
A. Wood-Burning Fireplace and Wood Burning Heaters (wood-burning heaters include woodstoves and fireplace inserts) Measures reduce directly emitted PM10 and PM2.5, and as an added benefit reduce NOx, VOC, CO, and air toxic emissions.			
Public Awareness Program	Inform the public about potential health hazards of wood smoke and encourage better wood burning practices or use of heating devices	Not available	Currently part of public awareness program
Curtailment During Period with Predicted High PM Levels	May be mandatory or voluntary	Not available	Recommend for consideration.
Require All Specified Wood-Burning Devices installed be U.S. EPA-Certified, Phase II or Equivalent	Prohibit the installation of non-EPA certified wood-burning appliances and wood-burning fireplaces	\$3,095 ~ \$5,216	Rule 225 already in place for Squaw Valley, Martis Valley Air Quality Ordinance and CEQA documents. Recommend combined rule for all of Placer County.
Number of Units	Limits the number of wood-burning fireplaces and wood-burning heaters that can be installed in new residential developments and nonresidential properties. Could also limit the number of additional units in existing properties	Not available	Currently covered in Martis Valley Air Quality Ordinance and CEQA documents. Recommend combined rule for all of Placer County.
Replacement of Non-Certified Appliances Upon Sale of Property	Non-certified units need to be removed and scrapped	\$8,680 ~ \$12,060	Mandatory woodstove removal program is already in place in Martis Valley. Incentive program in other areas of Placer County. Recommend combined rule for all of Placer County.
Control of Wood Moisture Content	Set moisture standard for “seasoned wood” offered for sale, since burning dry wood increases heating performance	Not available	Recommend for consideration.

Prohibit Fuel Types	Prohibit the burning of material not intended for use in wood-burning fireplaces and heaters	Not available	Recommend for consideration.
B. Non-Agricultural Open Burning			
Measures reduce directly emitted PM10 and PM2.5, and as an added benefit reduce NOx, VOC, CO, and air toxic emissions.			
Prohibition of Residential Open Burning	Prohibit outdoor residential open burning. Limit open burning to permitted activities	Not available	Regulated under District's open burning regulation.
Mandatory Curtailment of Non-Agricultural Open Burning	Prohibit non-agricultural open burning during the period with predicted high PM or ozone levels	Not available	Regulated under District's open burning regulation.
Control Smoke Production	Limit burn days in smoke sensitive areas and emissions for mechanized burners	Not available	Regulated under District's open burning regulation.
Performance Standards for Allowed Burns	Set up drying times, burn duration, preparation of fuels and management of burns, and permits requirement	Not available	Regulated under District's open burning regulation.
C. Fugitive Dust			
Measures reduce directly emitted PM10.			
Construction: Earthmoving	Dust suppressants, prohibit visible dust emissions (VDE) beyond property line	\$304	Rule 228 amended on 4/10/03. No further amendments are planned.
Construction Demolition	Dust suppressants, prohibit visible dust emissions (VDE) beyond property line, track out limits	\$197	Rule 228 amended on 4/10/03. No further amendments are planned.
Construction Grading Operations	Pre-watering, phasing of work, water application	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Inactive Disturbed Land	Restricts vehicle access, water/dust suppressants, prohibit beyond property line	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Bulk Materials Handling/Storage	Wind barriers, watering, prohibit VDE beyond property line	\$1,151 ~ \$28,293	Rule 228 amended on 4/10/03. No further amendments are planned.
Storage, Handling, and Transport of Petroleum Coke, Coal, and Sulfur	Require enclosure of all coke piles, street-sweeping, paving and maintenance of roads, and covers or slot-tops for transport trucks	\$10,000	No sources exist in Placer County.
Carryout and Track-out	Track out removal, require manual sweeping	< \$100	Rule 228 amended on 4/10/03. No further amendments are planned.
Disturbed Open Area	Water/dust suppressants to unvegetated area to limit VDE	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Paved Road Dust New/Modified Public and Private Roads	Paved shoulder/medians	\$5,577	Considered as part of Indirect Source Rule under development.

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Paved Road Dust Street Sweeping	Use of certified PM10 efficient street sweepers by governmental agencies	\$1,119	Considered as part of Indirect Source Rule under development.
Unpaved Parking Lots/Staging Areas	Limit VDE. Require water, gravel, dust suppressant, vegetative materials or paving or fugitive PM10 management Plan with requirements	\$344 ~ \$12,293	Rule 228 amended on 4/10/03. No further amendments are planned.
Unpaved Road	Limit VDE. Require water, gravel, dust suppressant, vegetative materials or paving	\$344 ~ \$12,293	Rule 228 amended on 4/10/03. No further amendments are planned.
Weed Abatement Activities	Pre-watering, phasing work, stabilization requirements, restricting vehicle access	Not available	Negligible emission inventory from this source category.
Windblown Dust	Define windblown dust as any visible emission	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Windblown Dust –Construction / Earth Moving	For earthmoving, cease all operations, apply chemical stabilizers, stopping vehicle traffic	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Windblown Dust – Disturbed Area	Water application/chemical stabilization	Not available	Rule 228 amended on 4/10/03. No further amendments are planned.
Windblown Dust – Bulk Materials / Storage Piles	Water application or temporary coverings	\$325 ~ \$462	Rule 228 amended on 4/10/03. No further amendments are planned.
Windblown Dust – Open Area	50% vegetation cover or 75% of land area must be covered by water, or 4 inches gravel to areas that cause or contribute to federal PM10 exceedance	\$697	Considered as part of Indirect Source Rule under development.
Agricultural Operations	Fugitive dust control from off-field agricultural sources	Not available	Negligible emission inventory from this source category.

D. Combustion Sources

Measures reduce NOx, VOC, CO, or PM10 and PM2.5.

Boilers, Steam Generators, and Process Heaters (NOx)	Limit NOx emissions from gaseous fuel or liquid fuel fired boilers, steam generators, or process heaters	\$2,807 ~ 21,060	Rule 231 already in place. No further amendments are planned.
IC Engines (NOx, VOC)	Limit NOx and VOC emissions from gaseous and liquid fueled stationary and portable engines over 50 bhp	\$2,093 ~ \$50,494	Rule 242 adopted on 4/10/03. No further amendments are planned.
Lime Kilns (NOx)	Limit NOx emissions from lime kilns	\$423	No significant sources in the District.
Cement Kilns (NOx, PM)	Limit NOx and PM emissions from cement kilns	\$830 ~ \$1,330	No significant sources in the District.
Petroleum Coke Calcining Operations (SOx)	Limit SOx emissions from operations of petroleum coke calcining equipment	\$590	No sources in the District.
Turbines (NOx)	Limit NOx emissions to the atmosphere from the operations of	\$3,600 ~ \$20,000	Rule 250 already in place. No further amendments are planned.

	stationary gas turbines		
Furnaces (NOx)	Set NOx emission limitation for glass melting furnaces and central furnaces	From minimal cost to \$6,800	No sources in the District.
Residential Water Heaters (NOx)	Limit NOx emissions from water heaters with heat input rates	\$4,400 ~ \$16,000	Rule 246 already in place. No further amendments are planned.
Commercial Charbroiling Operations (VOC, PM)	Require new and existing chain driven charbroilers to be equipped with a catalytic oxidizer control device	\$3,017	Recommended for consideration.
E. Composting and Related Operations			
Measures reduce ammonia and VOC.			
General Administrative Requirements	Require composting, chipping, and grinding facilities to register and provide facility and throughput information	\$8700 ~ \$10,000	Considered as part of Indirect Source Rule under development..
Chipping and Grinding Operations	Prevent inadvertent decomposition associated with stockpiling of green and/or food waste	\$8700 ~ \$10,000	No significant sources in the District.
Composting	Require co-composting operations to reduce VOC and ammonia emission by 80%	\$8700 ~ \$10,000	No significant sources in the District.
F. Storage, Transfer, and Dispensing Operations			
Measures reduce VOC.			
Gasoline Transfer and Dispensing Facilities	Limit emissions of VOC from gasoline dispensing facilities through equipment and operational requirements	Not available	Rule 214 already in place. No further amendments are planned.
Organic Liquid Storage	Limit VOC emissions from storage tanks with a capacity of 264 gallons and greater through operation and equipment requirements	\$13,000 ~ \$15,700	Rule 212 already in place. No further amendments are planned.
G. Leaks and Releases			
Measures reduce VOC.			
Equipment Leaks	Limit VOC and methane emissions from leaking equipment at petroleum refineries, chemical plants; bulk plants, and bulk terminals.	\$48 ~ \$10,712	No refinery and chemical/gasoline plant facilities in the District. Bulk plants and terminals covered under Rule 212.
H. Product Manufacturing			
Measures reduce VOC.			
Coating and Ink Manufacturing	Set forth operational and "housekeeping" requirements for coatings and ink manufacturing	Not available	No sources in the District.
Fiberboard Manufacturing	Limit VOC emissions from fiberboard	\$4,000 ~ \$6,000	Rule 229 already in place. No further

	manufacturing		amendments are planned.
Food Product Manufacturing and Processing	Limit VOC emissions from solvents used in food product manufacturing and processing operations	\$4,732	No sources in the District.
Pharmaceuticals and Cosmetics Manufacturing Operations	Set forth equipment and operational requirements for pharmaceutical and cosmetic manufacturing	Not available	No sources in the District.
Polyester Resin Operations	Limit VOC emissions from all polyester resin operations	\$719	Rule 243 adopted on 4/10/03. No further amendments are planned.
Polymeric Cellular Products	Set forth emission limits for polymeric cellular products manufacturing operations	\$8,000 ~ \$11,000	No sources in the District.
Surfactant Manufacturing	Require to reduce the total emissions of VOC from surfactant manufacturing equipment	Not available	No sources in the District.
I. Coating Operations Measures reduce VOC.			
Adhesives and Sealants	Reduce VOC emissions from the application of adhesives, adhesive primers, sealants, sealant primers, or any other primers through operational control	\$1060	Rule 235 amended on 4/8/04. No further amendments are planned.
Architectural Coatings	Limit the content of VOC in architectural coatings to between 100~730 g/l	\$5,400 ~ \$7,800	Rule 218 amended on 12/13/01. No further amendments are planned.
Glass Coating	Limit VOC emissions from the coating of glass products	\$1,050 ~ \$2,900	No sources in the District.
Graphic Arts	Limit VOC emissions from graphic arts operations	\$8,600	Rule 239 amended on 4/8/04. No further amendments are planned.
Magnet Wire Coating Operations	Limit VOC emissions to all coating operations on magnet wire, where the wire is continuously drawn through a coating applicator	Not available	No sources in the District.
Marine Coating Operations	Limit the content of VOC in coating operations of marine and fresh water vessels, oil drilling platforms, navigational aids and component parts, and structures intended for exposure to a marine environment	Not available	No sources in the District.
Metal Container, Closure, and Coil Coating Operations	Limit VOC emissions from metal container, metal closure and metal coil coating through operational controls	Not available	Rule 223 already in place. No further amendments are planned.

	and the VOC content of products		
Metal parts and products Coatings	Limit VOC emissions from the coating of metal parts	Not available	Rule 223 already in place. No further amendments are planned.
Motor Vehicle Assembly Line Coating Operations	Set forth VOC emission limits and VOC content of motor vehicle coatings	Not available	No sources in the District.
Paper, Fabric, and Film Coating Operations	Limit the VOC content of applicable coatings, application method and cleaning requirements	Not available	No sources in the District.
Plastic, Rubber, and Glass Coatings	Limit the VOC content of coating used on plastic, rubber, and glass	Not available	Rule 230 already in place. No further amendments are planned
Screen printing Operations	Limit VOC content of screen printing materials	Not available	Rule 239 amended on 4/8/04. No further amendments are planned.
Spray Booth Facilities	Further reduce VOC emissions from spray coating or laminating operations in high VOC emitting facilities	\$5,484	No significant sources in the District.
Vehicle Refinishing	Limit VOC emissions from coating applied on Group 1 and Group II vehicles	Not available	Rule 234 already in place. No further amendments are planned
Wood Flat Stock Coatings	Limit VOC content of coatings, inks, and adhesives	\$1,800	Rule 238 already in place. No further amendments are planned
Wood Product Coatings	Limit VOC content of wood products coatings	\$1,933 ~ \$2,972	Rule 236 already in place. No further amendments are planned
J. Solvent Cleaning and Degreasing			
Measures reduce VOC.			
Cleaning Operations	Limit VOC emissions from solvent cleaning operations and activities	\$264, ~ \$2,570	Rule 216 amended on 12/11/03. No further amendments are planned.
Degreasing Operations	Limit VOC emissions from cold cleaners and vapor degreasers	\$3,320 ~ \$12,940	Rule 216 amended on 12/11/03. No further amendments are planned.
Use of Solvents	Limit VOC emissions from VOC containing materials or equipment not subject to VOC limits in any other, specific district regulation	\$7,050	Rule 219 already in place. No further amendments are planned
K. Miscellaneous			
Measures reduce VOC, SOx, ammonia, or PM10 and PM2.5.			
Soil Decontamination	Limit the emissions of organic compounds from soil been contaminated by organic chemical or petroleum chemical leaks or spills	\$7,100 ~ \$86,900	Regulated under Rule 202 and 205. No further amendments are planned.
Solid Waste Landfills	Limit VOC emission from municipal solid waste landfills through installation of gas collection and control systems	Not available	Rule 237 amended on 10/09/03. No further amendments are planned.

Wood working Operations	Require any woodworking facility to use PM10 emission control devices	\$3,200	Regulated under Rule 202, 205, and 207. No further amendments are planned.
L. General Rules to Reduce Directly Emitted PM from Stationary and Area Sources			
These rules are generic and apply to sources that may not be regulated through a specific rule or permit requirement. The rules are intended to reduce directly emitted PM10 and PM2.5.			
Visible Emission Limits	Prohibit discharges into the air from any single source of emissions for a period more than 3 minutes in any 1 hour as dark or darker than No.1 on the Ringelmann Chart	Not available	Rule 202 already in place. No further amendments are planned
Combustion Contaminants	Prohibit discharges into the air from the burning of fuel of combustion contaminants exceeding 0.23 g/m ³	Not available	Rule 210 already in place.
Grain Loading	Prohibit release or discharge into the atmosphere from any single source or single processing unit PM emissions in excess of 0.1 grains/ft ³ of dry exhaust gas at standard conditions	Not available	Rule 207 already in place.
M. Programs that Reduce PM Emissions from Mobile Sources			
Measures primarily reduce directly emitted PM10, PM2.5, NOx, and VOC.			
Incentive Programs	Use incentive programs including DMV funds, heavy-duty engine incentive program, lower emission school bus program, Moyer program, SECAT program, light and medium duty vehicle program, lawn mower buy back program to encourage rebuilding, retrofitting, replacing, trading old engines for emission reduction	Not available	Programs in place.
Transportation Related Programs	Include on-road motor vehicle mitigation options, transportation outreach program, Spare the Air program, and public awareness programs to reduce vehicle VMT for emission reduction	Not available	Programs in place.

ATTACHMENT B
PROPOSED DISTRICT IMPLEMENTATION SCHEDULE

Control Measure	Further Study Completed	If Cost-effective Emission Benefit Determined	
		Consideration by the Board	If adopted, Full Implementation Date
Wood Burning Fireplaces and Wood Burning Heaters			
Require use of USEPA -certified Phase II of equivalent devices	2006	2007	2008
Public Awareness Program which may include either a voluntary or mandatory curtailment	2006	2007, if adopted program needed	2007
Require replacement of Non-certified units upon sale of property	2006	2007	2008
Control wood moisture content, prohibit materials not intended for use in fireplace	2006	2007	2008
Restrict number of wood burning fireplaces allowed in new residential developments	2006	2007	2008
Combustion			
Add-on control for chain-driven charbroilers	2007	2008	2009
Fugitive Dust/Agricultural Operations			
Limit PM emissions from agricultural sources that occur when tilling or mulching is performed in high winds	2007	2008	2008
Limit PM emissions from vehicle travel on paved roads by requiring use of PM10 efficient street sweepers by governmental agencies or their contractors	2008	2008	2013
Limit PM emission from vehicle travel on unpaved roads	2010	2011	2016