Revised Draft

Air Resources Board's
Proposed State Strategy for California's
2007 State Implementation Plan

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California Environmental Protection Agency

Air Resources Board

This document has been prepared by the staff of the California Air Resources Board. Publication does not signify that the contents reflect the views and policies of the Air Resources Board. The Air Resources Board will consider this document as a revision to the California State Implementation Plan at a noticed public meeting tentatively scheduled for June 21-22, 2007.

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Please send written comments to:

Mr. Kurt Karperos, P.E., Chief
Air Quality and Transportation Planning Branch
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812
Phone: (916) 322-0285
Fax: (916) 322-3646

For general questions, contact:

Mr. Ravi Ramalingam, P.E., Manager
Transportation Strategies Section
Phone: (916) 322-2085
Email: rramalin@arb.ca.gov

Air Resources Board's
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2007 State Implementation Plans

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Executive Summary

Introduction

The Air Resources Board's proposed State Strategy for California's 2007 State Implementation Plan (SIP) is a comprehensive strategy designed to attain federal air quality standards through a combination of technologically feasible, cost-effective, and far reaching measures. It describes the scope of the State's ozone and fine particulate matter (PM2.5) nonattainment problems and presents ARB staff's recommendations on how California can comply with federal standards. The proposed strategy will be considered for adoption by ARB's Governing Board on June 21-22, 2007.

Under State law, ARB has the responsibility to develop SIP strategies for mobile sources and consumer products, to coordinate SIP strategies with the Bureau of Automotive Repair (BAR) and Department of Pesticide Regulation (DPR), and to oversee local district programs for stationary sources.

The 2007 SIP is the first plan designed to show how California will meet the federal 8-hour ozone standard – it represents a transition from the less stringent 1-hour standard that was the benchmark for previous SIPs. Since the new standard is more stringent, the U.S. Environmental Protection Agency (U.S. EPA) set presumptive deadlines that allow more time for attainment. Nonetheless, the measures California has adopted to meet the 1-hour standard remain in place and will deliver substantial new reductions over the next few years. These measures have enabled San Diego, Ventura, Santa Barbara, and the San Francisco Bay Area to meet the 1-hour ozone standard.

The benefits of California's mobile source control program are evident and serve as the foundation for this new State Strategy. For example, the mobile source regulations already in place will reduce today's emissions from passenger vehicles and heavy-duty trucks another 50 percent by 2015. The ARB staff's proposed State Strategy would further accelerate the reductions. Staff's proposed State Strategy addresses three key mobile source issues: the need to clean up the legacy diesel fleets, the national and international nature of many diesel fleets, and limitations on SIP credit for unsecured funding.

The proposed State Strategy, in combination with local actions, would provide emission reductions necessary to the meet 8-hour ozone standard in the two most challenging regions -- the South Coast Air Basin and the San Joaquin Valley. The State Strategy is also necessary, in whole or part, for the Sacramento region, Ventura, and several locations downwind of urban areas. Ozone SIPs are due to U.S. EPA in June 2007.

The State Strategy provides reductions needed for PM2.5 attainment in the South Coast and expected to be necessary for the San Joaquin Valley. PM2.5 SIPs for these two regions are due in 2008.

Adoption of the State Strategy by the Board would create an enforceable commitment for new emission reductions by the attainment deadline for each region. These commitments reflect the proposed attainment deadlines of 2024 for ozone for the South Coast and San Joaquin Valley and a deadline of 2015 for PM2.5. As in past SIPs, staff has estimated the expected emission reductions from various measures and a schedule for Board consideration. The Board retains the ability to modify staff proposals and achieve the necessary reductions through other measures or mechanisms.

This proposal includes aggregate emission reduction commitments for 2014 for South Coast and San Joaquin Valley PM2.5, and for 2020 and 2023 for South Coast and San Joaquin Valley ozone. The commitments precede the attainment deadline by one year in order to comply with federal SIP requirements. Staff may propose additional commitments for Board consideration in the future to the extent necessary. A PM2.5 SIP is under development by the San Joaquin Valley District and on track for adoption in 2008. The South Coast has proposed early adoption of a PM2.5 SIP in parallel with the ozone SIP due this year.

The 2023 commitment for ozone includes the long-term emission reductions needed for ozone attainment in the South Coast and San Joaquin Valley under the "new technology" provisions of the Clean Air Act (section 182(e)(5)). Staff proposes that ARB take on the full legal commitment for these reductions with the understanding that advances in technology for sources under local air districts' jurisdiction should contribute to future reductions. Until new mobile and stationary technologies become available, we propose to defer the issue of how to apportion long-term emission reduction obligations among responsible agencies. This issue will be revisited in future SIP updates. In the meantime, ARB would be responsible for all the long-term reductions upon SIP approval.

Proposed Mobile Source Strategy

The mobile source strategy has two distinct components – more stringent standards for new engines and cleanup of existing fleets. For passenger vehicles, ARB's Low Emission Vehicle Program ensures that new vehicles entering the fleet are exceptionally clean. The challenge is maintaining low emission levels over time and getting the oldest, dirtiest remaining vehicles off the road as soon as possible. The State Strategy proposes improvements to Smog Check and expansion of vehicle scrap programs to achieve these goals.

The biggest mobile source challenge is cleaning up legacy fleets of diesel engines – including trucks, construction and farm equipment, ships and locomotives. Emissions of NOx (nitrogen oxides) from diesel engines contribute to both ozone and PM2.5 levels. Emissions of SOx (sulfur oxides) from ships are a significant contributor to PM2.5 levels. Directly emitted particulate matter from diesel engines contributes to PM2.5 levels. ARB has adopted a number of measures to reduce emissions from diesel fleets under ARB's 2000 Diesel Risk Reduction Plan and 2006 Goods Movement Emission Reduction Plan.

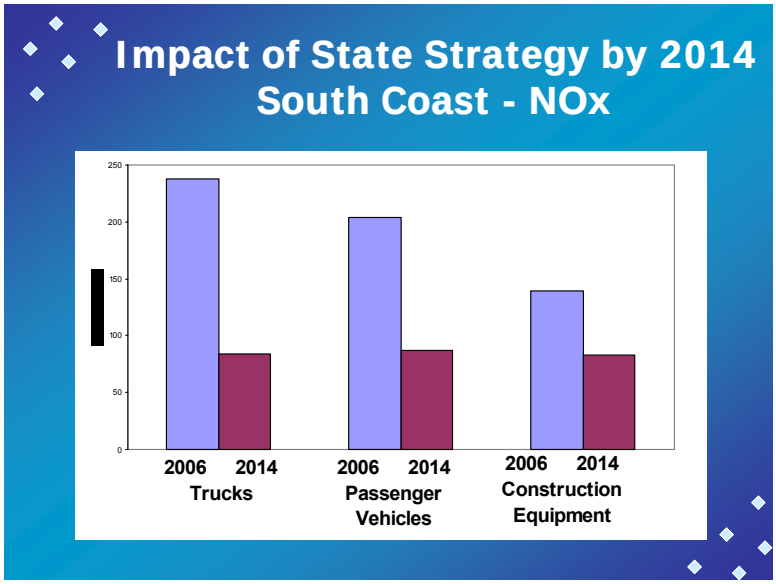
The proposed State Strategy would incorporate measures from these plans into the California SIP. This includes new measures for port trucks, statewide truck fleets, ships traveling and in port, locomotives, and harbor craft. These measures would accelerate introduction of newer, cleaner engines and, where available, require retrofit controls. The cost of these measures will be in the billions of dollars but these reductions are necessary to meet air quality standards and reduce the health and economic impacts of air pollution in California.

The mobile source reductions rely primarily on regulatory actions by ARB, BAR, and U.S. EPA. International actions to require cleaner new ship engines and retrofits are also part of the longer-term strategy. Actions by the ports and private sector and public funding would complement the regulatory strategies. However, the enforceable SIP obligation to achieve the specified emission reductions would rest with the Board.

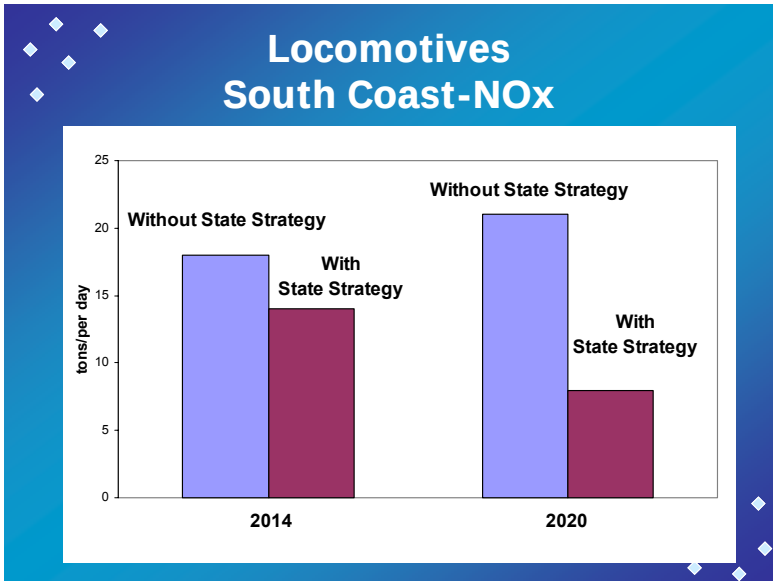
The Board's authority to regulate mobile sources varies by category and circumstance. Under California law, the Board can set new engine standards for mobile sources, but federal preemptions and practical limitations apply to many diesel engines categories. For example, under the federal Clean Air Act, only U.S. EPA can set new engine standards for locomotives and construction and farm equipment equipped with off-road engines less than 175 horsepower. In the case of new heavy-duty diesel trucks and other new and in-use off-road engines, ARB may establish emission standards, but must obtain a waiver/authorization from U.S. EPA before it can enforce such regulations. The interstate nature of trucking makes national standards for new trucks a practical necessity. While not admitting preemption, we recognize that U.S. EPA has the responsibility to represent California's interests in the international standard setting process for ocean-going ships. In short, ARB must rely on the federal action to set the new technology standards that form much of the basis for ARB staff's proposed measures to accelerate cleanup of legacy diesel fleets.

The timing of federal standards is an important part of the picture. California can only accelerate the introduction of cleaner technology once cleaner engines are available. The cleanest NOx standards phase in for trucks in 2010 and between 2013-2017 for various types of construction and other off-road equipment. U.S. EPA has proposed more stringent NOx standards for new locomotives that would begin in 2017. ARB staff continues to make the case that these standards need to be implemented prior to 2014. While the interim standards now in place are contributing to current progress, the magnitude of the reductions needed in the South Coast and San Joaquin Valley will ultimately require the cleanest technology in every diesel engine application.

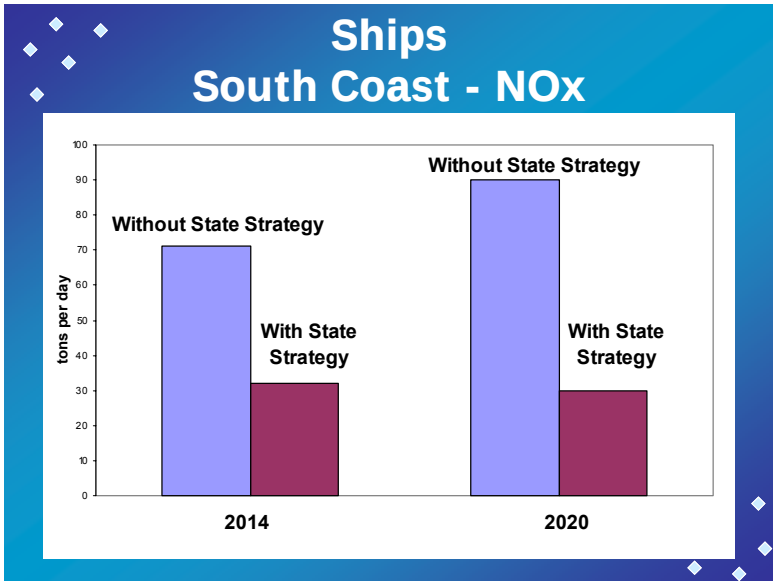
The proposed mobile source strategy and SIP commitments are described in Chapter 3. Individual measures are described in more detail in Chapter 5. The figure below shows the decrease in emissions for passenger vehicles, heavy-duty trucks, and construction equipment between now and 2014 with the proposed State Strategy. Due to increasingly more stringent mobile source controls, emissions from these categories are all on a downward trend, despite growth in population, travel, and the economy. The new measures in the proposed State Strategy would accelerate these emissions reductions. ARB staff is proposing an aggressive new emission reduction commitment of 122 tons per day of NOx reductions in the South Coast by 2014 in order to meet the region's PM2.5 attainment needs. This would bring the total mobile source NOx reductions achieved between 2006 and 2014 to about 450 tons per day.



In contrast to passenger vehicles, trucks, and construction equipment that show substantial emission decreases with natural fleet turnover, locomotive and ships show an increase in emissions without the proposed State Strategy. Locomotive emissions have been decreasing in the South Coast due to the accelerated introduction of the cleanest current technology (Tier 2). However, as shown below, growth overtakes this benefit by 2014. The proposed State Strategy includes a measure to accelerate introduction of the next generation of clean technology once U.S. EPA adopts its proposed new Tier 4 standards. The 2014 benefits assume Tier 4 engines becoming available in 2012. The 70 percent reduction projected for 2020 is based on the proposed measure to accelerate the introduction of Tier 4 locomotives to California.



Ocean-going ships show an even greater increase in emissions without the State Strategy. Ship engines are largely uncontrolled, and growth in goods movement through California ports will exacerbate this problem. The figure below shows the benefits of the proposed State Strategy in the South Coast.



<u>Proposed Consumer Products Strategy</u>

Consumer products are expected to become the largest source of reactive organic gas (ROG) emissions in the South Coast and the third largest source in the San Joaquin Valley by 2020. The magnitude of the emissions indicates that additional controls for this sector remain important, even though the average photochemical reactivity of the ROG emissions from consumer products is about one-third that of motor vehicle exhaust. The proposed State Strategy would continue ARB's commitment to reduce ROG emissions from consumer products.

Two new phases of control are proposed. One is under development for Board consideration by 2008 and the other between 2010 and 2012. As part of ARB's longer-term strategy, staff also proposes to explore additional market-based mechanisms to encourage the development, distribution, and purchase of cleaner, very low, or zero emitting products.

The table below shows the expected reductions from the proposed State Strategy in 2014 for South Coast and San Joaquin Valley. The benefits of the State Strategy will increase over time. The expected reductions in 2020 and 2023, along with the proposed timeframes for staff development, Board consideration, and implementation of the these measures is found in Chapter 3.

Expected Emission Reductions from Proposed New SIP Measures
(tons per day)
South Coast and San Joaquin Valley -- 2014

	South Coast		San Joaquin Valley	
Proposed New SIP Measures	**NOx**	**ROG**	**NOx**	**ROG**
Passenger Vehicles	**14.4**	**17.7**	**3.8**	**6.5**
Smog Check Improvements (BAR)	12.0	10.5	3.3	2.9
Expanded Vehicle Retirement	2.4	2.8	0.5	0.7
Modifications to Reformulated Gasoline Program	--	4.4	--	2.9
Heavy-Duty Trucks	**47.3**	**5.1**	**61.4**	**6.4**
Cleaner In-Use Heavy-Duty Trucks	47.3	5.1	61.4	6.4
Goods Movement Sources	**49.4**	**0.7**	**7.2**	**0.5**
Ship Auxiliary Engine Cold Ironing & Clean Technology	18.5	--	--	--
Cleaner Main Ship Engines and Fuel	20.0	--	--	--
Port Truck Modernization	2.0	--	--	--
Accelerated Intro. of Cleaner Line-Haul Locomotives	4.3	0.7	7.2	0.5
Clean Up Existing Harbor Craft	4.6	--	--	NYQ
Off-Road Equipment	**10.5**	**2.7**	**3.7**	**0.9**
Cleaner In-Use Off-Road Equipment (e.g.,Construction)	10.5	2.7	3.7	0.9
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ	NYQ
Other Off-Road Sources	**0.4**	**6.6**	**0.1**	**3.5**
New Emission Standards for Recreational Boats	0.4	4.2	0.1	1.3
Expanded Off-Road Rec. Vehicle Emission Standards	--	2.4	--	2.2
Additional Evaporative Emission Standards	--	NYQ	--	NYQ
Vapor Recovery for Above Ground Storage Tanks	--	NYQ	--	NYQ
Areawide Sources	**--**	**12.9**	**--**	**5.7**
Consumer Products Program	--	12.9	--	3.2
Pesticides: DPR 2008 Regulation	--	NYQ	--	2.5
Emission Reductions from Proposed New Measures	**122**	**46**	**76**	**23**

NYQ = Not Yet Quantified. BAR = Bureau of Automotive Repair. DPR = Dept. of Pesticide Regulation

Locomotives measure relies on U.S. EPA rulemaking and industry agreement to accelerate fleet turnover.
Note: Emission reductions reflect the combined impact of regulations and supportive incentive programs. Emission reduction estimates for each proposed measure are shown for informational purposes only. Actual emission reductions from any particular measure may be greater than or less than the amounts shown.

Major Issues

Bump Up to "Extreme" for Ozone

There is concern that the proposed State Strategy does not provide sufficient emission reductions to show attainment of the ozone standard earlier than the deadlines proposed in the South Coast and San Joaquin Valley SIPs. Both ozone SIPs propose an "extreme" classification for the 8-hour ozone standard which sets an attainment deadline of 2024. Under the federal Clean Air Act, the extreme classification carries with it an ability to rely on as yet undefined new technologies where necessary (section 182(e)(5)).

Both regions were previously classified as "extreme" for the 1-hour ozone standard based on the severity of their ozone problem. With the transition to the more stringent 8-hour standard, these districts were classified as severe-17, with an attainment deadline of 2021 (South Coast), and serious, with an attainment deadline of 2013 (San Joaquin Valley), based solely on their ambient concentrations of ozone. In reality, both districts need more time to accomplish the substantial emission reductions required for attainment.

Air districts have the ability to request a reclassification, and in the case of a request to reclassify to "extreme," U.S. EPA must grant the request. Since such a request frames a district's attainment demonstration, ARB must also accept the reclassification request unless the Board rejects a district SIP as inconsistent with federal requirements.

The proposed reclassifications raise the issue of how the 2024 attainment deadline will affect air quality progress and the health impacts of air pollution in these regions. This is a very real concern. Accordingly, in the SIP development process considerable effort was devoted to assessing whether these bump-ups could be avoided.

ARB staff considered whether existing technologies, if applied across the board to all mobile and stationary sources, could achieve the necessary emission reductions to attain sooner. Unlike rulemaking processes, this analysis was performed for SIP development purposes without considering cost as a constraint.

The analysis showed that all diesel fleets would need to turn over to the newest engine standards that phase in between 2010 and 2017, all passenger vehicles would need to be no older than 10 years, and substantial additional reductions would be needed from new technologies for both mobile and stationary sources. The only other potential option for fully achieving the remaining reductions would be to constrain growth, business operations, and personal travel. Absent policy decisions to impose such restrictions, ARB staff believes it is necessary to make use of the new technology provision of the Clean Air Act. For the San Joaquin

Valley, about 10 percent of the necessary reductions would fall in this category. For the South Coast, it would be about 25 percent of the necessary reductions.

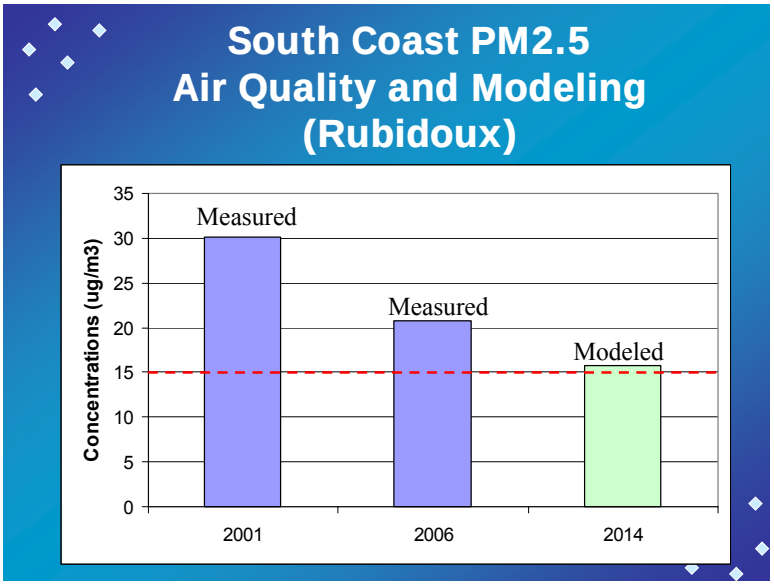
To address concerns about delays in attainment, ARB staff proposes to continue to identify and pursue additional actions that would further accelerate air quality progress. While it is unlikely that the entire ozone attainment gap will be filled without new technology, staff believes additional progress could be made if, for example, more incentive funds became available. Also, as regions move closer to attainment, episodic "spare the air" type programs may be able to provide the final increment of reductions needed a few days per year. Public education and outreach to encourage voluntary actions have historically been key elements of these programs.

South Coast PM2.5 SIP

How the SIP should address the PM2.5 attainment challenge in the South Coast continues to be controversial. The proposed State Strategy along with district measures leaves an emission reduction gap in the South Coast's proposed attainment demonstration of about 70 tons per day of NOx in 2014. The South Coast air district staff has identified a set of measures -- mobile source NOx measures -- for ARB to adopt to close the gap. This would be above and beyond the 451 tons per day of NOx reductions in the proposed State Strategy. ARB staff believes the District's suggested mobile source measures are not feasible without billions of dollars of unidentified subsidies to expedite the introduction of the newer, cleaner diesel vehicles and equipment.

ARB technical staff has reviewed South Coast's proposed PM2.5 attainment demonstration and identified additional local measures to reduce directly emitted particulate matter. ARB staff believes these measures can bridge the gap and achieve the standard by 2014. These measures would reduce emissions from residential wood smoke, restaurant cooking, and dust-generating activities. The ARB staff's analysis and the peer review of the staff methodology are discussed in Chapter 4.

It is important to recognize that the projected gap in reductions is based on a modeling assessment that is more pessimistic than the measured air quality trend. Between 2001 and 2006, the measured PM2.5 annual average dropped from 30 to just over 20 ug/m^3 consistent with the downward emissions trend. If that trend continues, the emission reductions in the proposed State Strategy will be sufficient for attainment. The South Coast predicts that with ARB staff's proposed State Strategy, the highest remaining concentration in 2014 would 15.7 ug/m^3 -- less than one microgram above the 15 ug/m^3 standard. Even if that modeling is correct, ARB's alternative attainment strategy would close that gap.



In light of the measured PM2.5 progress over the past 15 years, and the magnitude of the new emission reductions that will occur, ARB staff believes that the South Coast will attain the PM2.5 standard by 2015 with the mobile source measures in the proposed State Strategy. Nonetheless, to be health protective and meet U.S. EPA SIP modeling requirements, staff believes that additional feasible measures should be pursued. Using the South Coast model, ARB staff found that the proposed local measures for residential wood smoke, restaurant cooking, and fugitive dust would close the apparent gap.

Proposed Action

Staff is recommending that the Board adopt the proposed State Strategy to meet both ozone and PM2.5 attainment needs in the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District at ARB's June 21-22, 2007 public meeting. The State Strategy, in combination with near-term local air district measures, must meet the emission reduction target in each region's attainment demonstration.

The sequence of public meetings to consider the various SIP elements is:

- April 30, 2007 – San Joaquin Valley Air Pollution Control District Governing Board consideration of the San Joaquin Valley Ozone Plan.
- June 1, 2007 (tentative) – South Coast Air Quality Management District Governing Board consideration of the South Coast Air Quality Management Plan.
- June 14, 2007 – ARB consideration of San Joaquin Valley Ozone Plan.
- June 21-22, 2007 – ARB consideration of the proposed State Strategy and South Coast District Air Quality Management Plan for ozone and PM2.5.
- April 2008 – Completion of San Joaquin Valley PM2.5 SIP.

Next Steps

Once local plans and the State Strategy are approved by the local and State governing boards, they are submitted to U.S. EPA for approval.

SIPs are generally updated on a triennial basis for regions with the most persistent air quality problems. When U.S. EPA revises national ambient air quality standards, new SIP planning processes are triggered. U.S. EPA recently tightened its 24-hour PM2.5 standard and is currently reviewing the 8-hour ozone standard. Final U.S. EPA action on the 8-hour ozone standard review is expected by March 2008.

Technical Supporting Documents

By May 7, 2007 – 45 days before the June 21-22, 2007 Board hearing — ARB staff will release these additional elements as an appendix to this document.

- Economic analysis;
- Environmental impacts analysis;
- Detailed emissions data;
- Reasonable Further Progress demonstrations;
- Contingency reductions for progress milestone years; and
- Legal authority and other federally required submittals.

1. BACKGROUND

General SIP Requirements

California's 2007 State Implementation Plans (SIPs) are a combination of State and local air quality planning documents that must show how California will meet federal the 8-hour ozone standard statewide. The San Joaquin Valley, South Coast Air Basin, Sacramento region, San Diego, Ventura, and a number of air districts downwind of urban areas are nonattainment for the ozone standard. Ozone SIPs must be submitted to U.S. EPA by June 15, 2007.

This document is the State's emission reduction strategy for sources of pollution under State and federal authority (State Strategy), and, for every local region not meeting federal standards, a demonstration of how attainment of the 8-hour ozone standard will be achieved.

In addition to ozone SIPs, the South Coast and San Joaquin Valley must prepare PM2.5 SIPs for submittal to U.S. EPA by April 5, 2008. For the South Coast Air Basin, the South Coast Air Quality Management District is developing a PM2.5 SIP in parallel with the ozone SIP. The San Joaquin Valley PM2.5 SIP in on track to be submitted in 2008.

The 2007/2008 ozone and PM2.5 SIPs are another step in the air quality planning process that over the years has helped define new actions to improve California's air quality. ARB has adopted a series of regulations over the past 10 years to implement measures in the 1994 ozone SIP, as well as additional new ARB measures identified in the 2003 SIP update. New mobile source regulations, reformulated gasoline, and multiple consumer products regulations envisioned in these SIPs have been adopted and are being implemented today. And, while California has serious air quality challenges ahead, it is important to recognize the progress made as a result of California's landmark air pollution control programs. With that experience and history of success, we need to continue to do more. ARB staff recognizes the importance of the new State measures and are proposing a full slate of new measures for development and consideration by the Board.

National Air Quality Standards

The U.S. EPA adopts standards for ambient (outdoor) air pollutants designed to protect public health. Extensive studies on the health effects of air pollution worldwide have confirmed the importance of continuing to reduce people's exposure to air pollution. U.S. EPA is required to review its air quality standards every five years.

In July 1997, the federal government announced new national ambient air quality standards (NAAQS) for the pollutants ozone and particulate matter (PM). The new standards provide more protection from the harmful health effects of these pollutants. The ozone standard was revised to protect against longer pollutant exposure periods by requiring that ozone concentrations not exceed specified levels over an 8-hour period instead of a 1-hour period. A new particulate matter standard was added to protect against the smaller inhalable particles, less than two and a half microns in diameter (PM2.5). Air quality standards have become more stringent over time as new studies have shown adverse health effects at lower levels. The standards below are the current benchmark for federal SIP requirements. U.S. EPA is currently reviewing the adequacy of the current 8-hour standard. And in December 2006, U.S. EPA adopted a more stringent 24-hour PM2.5 standard of 35 micrograms per cubic meter. This will likely mean that several new areas will be required to prepare a plan to attain the newer standard. Initial State recommendations for nonattainment areas are due in late 2007, with final nonattainment areas determined by U.S. EPA in early 2010. Plans for the revised 24-hour standard will be due in 2013, with attainment dates to be determined after U.S. EPA issues transition guidance.

Ozone Standard

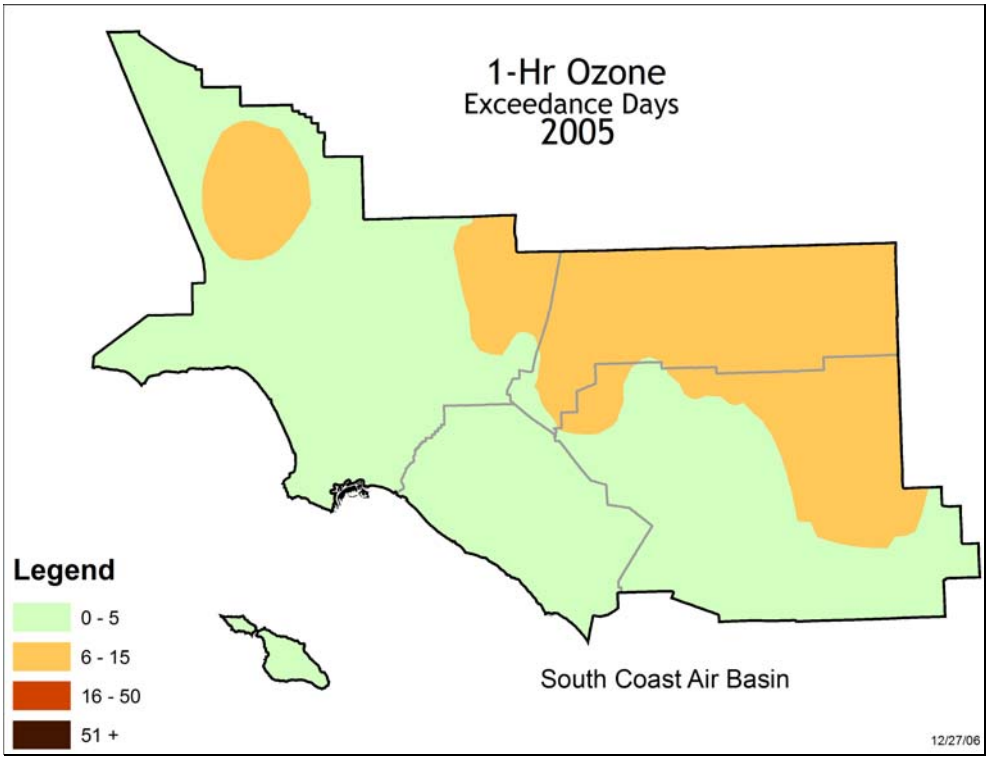
0.08 parts per million for 8 hours, not to be exceeded, based on the fourth highest concentration averaged over three years.

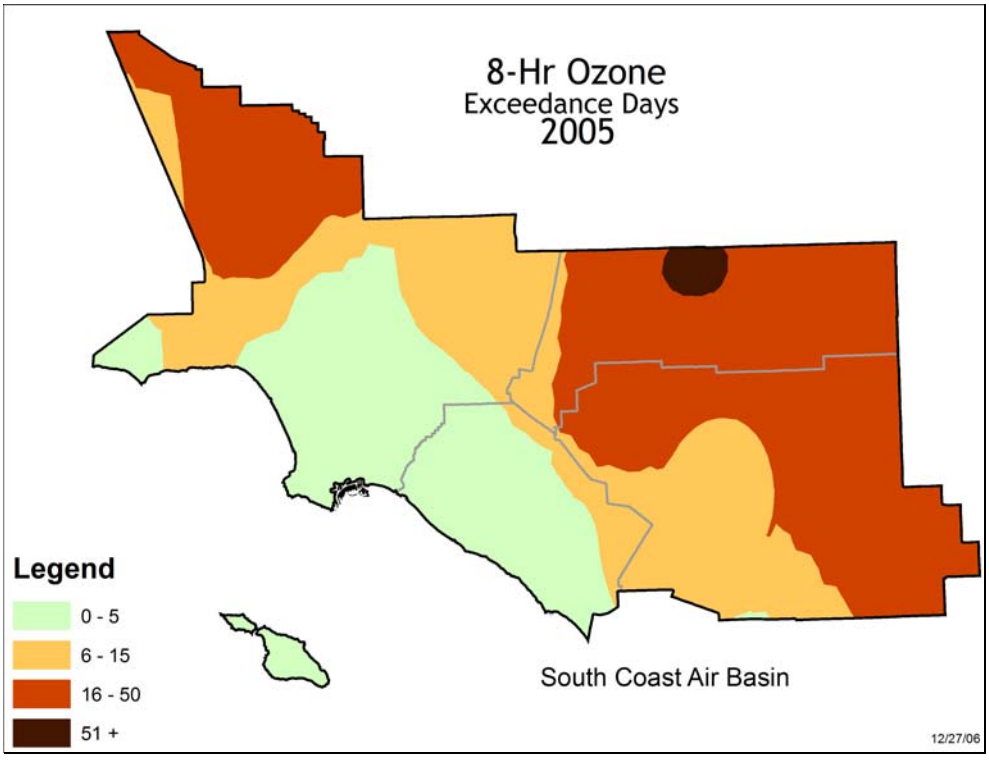
PM 2.5 Standards

65 micrograms per cubic meter for 24 hours, not to be exceeded, based on the 98th percentile concentration averaged over three years, *and*
15 micrograms per cubic meter annual average (arithmetic mean) averaged over three years.

How much more stringent is the 8-hour ozone standard than the 1-hour ozone standard? The two maps on the following page illustrate a dramatic difference in exceedance days (number of days that violated the standard) for the 1-hour standard versus the 8-hour standard in the South Coast air basin in 2005. While many areas of California continue to be in violation of federal air quality standards, real air quality progress has been made, as we will illustrate later. The clean air bar simply continues to be raised as we learn more about the health effects of air pollution.

Comparison of 1-Hr Ozone Standard and More Stringent 8-Hr Ozone Standard in the South Coast Air Basin





Health Effects of Ozone and PM2.5

Ozone

The formation and health impacts of ozone are very well studied. Ozone is a highly reactive gas that forms in the atmosphere through complex reactions between chemicals directly emitted from motor vehicles, industrial plants, consumer products and many other sources. It forms in greater quantities on hot, sunny, calm days making the summer season the key exposure period.

Considerable research over the past 35 years has investigated how people respond to inhaling ozone. These studies have consistently shown that inhalation of ozone can lead to inflammation and irritation of the tissues lining the human airways. This causes the muscle cells in the airways to spasm and contract, thus reducing the amount of air that can be inhaled. Symptoms and responses to ozone exposure vary widely, even when the amount inhaled and length of exposure is the same. Typical symptoms include cough, chest tightness, and increased asthma symptoms. Ozone in sufficient doses can also increase the permeability ("leakiness") of lung cells, making them more susceptible to damage from environmental toxins and infection.

Medical studies of large populations have found that ozone exposure is associated with an increase in hospital admissions and emergency room visits, particularly for lung problems such as asthma and chronic obstructive pulmonary disease. Several studies have also associated ozone exposure with increased premature mortality in elderly people with chronic diseases of the lungs and circulatory system.

People who exercise or work outdoors are at greater risk of experiencing adverse health effects from ozone exposure because they inhale more ozone. Current evidence has linked the onset of asthma to exposure to elevated levels of ozone in exercising children. Children and adolescents are at increased risk because they are more likely to spend time outdoors engaged in vigorous activities than adults and because they inhale more ozone per pound of body weight.

PM2.5

Particulate matter (PM) air pollution is also well studied. Particulate matter pollution is a complex mixture that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. PM can be directly emitted into the air in forms such as dust and soot. It can also be formed in the atmosphere from the reaction of various gases. Particulate matter is less than 10 microns in diameter (a micron is one-millionth of a meter) and is called PM10. Even smaller particles, those 2.5 microns or less in diameter, are called "fine particles" or PM2.5, and are the target of this SIP. PM2.5 is a component of PM10.

Extensive research has shown that PM can be inhaled into the deep portions of the lungs. Some inhaled particles are exhaled again, but others deposit in the lungs, which can lead to inflammation in both the lungs and the circulatory system. PM2.5 poses an increased health risk because it can penetrate deeper into the lungs and may also enter the bloodstream.

Population-based studies in hundreds of cities around the world have demonstrated a strong link between elevated particulate matter levels and premature death in people with pre-existing heart or lung disease. The two most important of these studies were performed in many cities in the United States, and have been ongoing for over 15 years. Both of these studies found a strong relationship between long-term PM exposure and premature death.

Scientists have observed higher rates of hospitalization, 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, and reductions in various measures of lung function.

The elderly and people with heart and/or lung diseases are particularly at risk of experiencing adverse effects from PM exposure. Studies have also shown that children may be particularly vulnerable to PM effects. There is evidence from the 10-year Children's Health Study funded by the ARB that in communities with high levels of PM children's lungs develop more slowly and that at maturity they tend to have lower lung capacity than children who grow up in communities with lower levels of PM. Just as with ozone, children and infants may also be more at risk of experiencing adverse effects from PM because they inhale more air per pound of body weight than do adults, they breathe faster, and have smaller body sizes. In addition, there is some evidence that children's immature immune systems may cause them to be more susceptible to PM than adults.

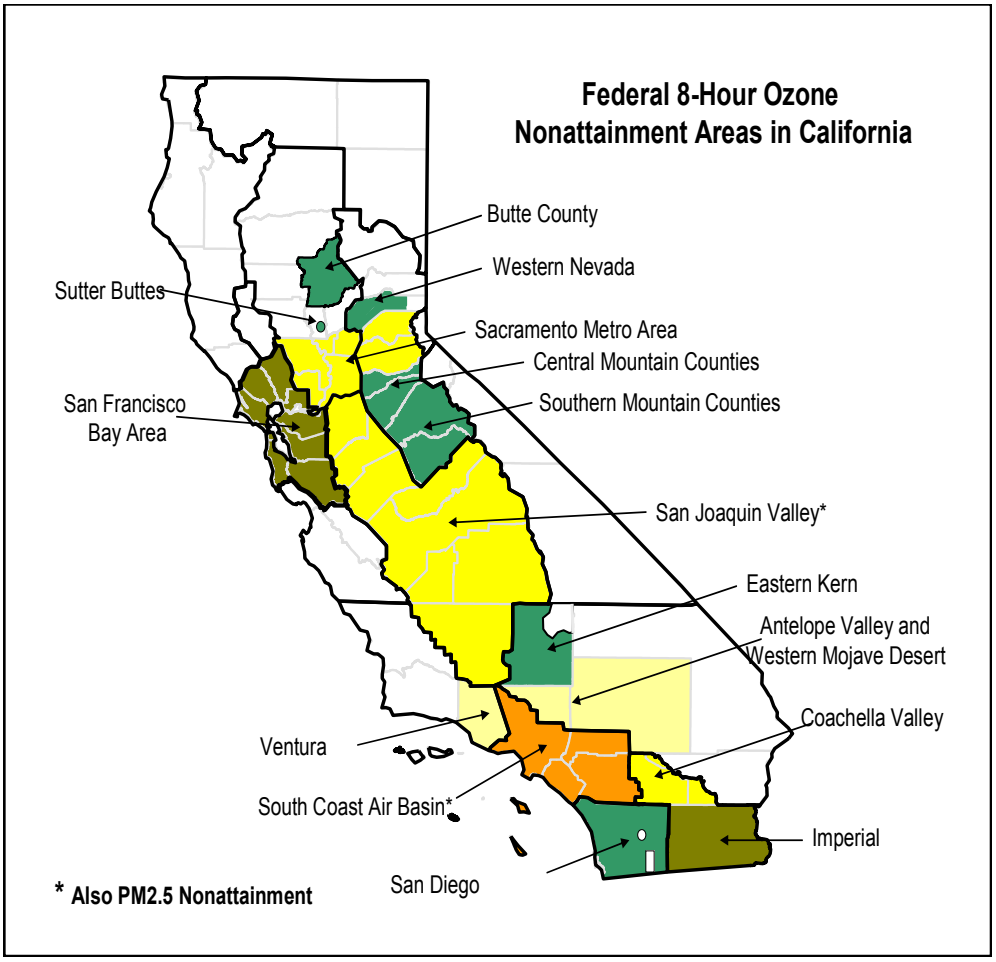
Nonattainment Areas and Air Quality Trends

Geographic areas that exceed a federal air quality standard are called nonattainment areas. A comprehensive network of monitoring stations throughout California measures air quality and provides the data necessary to determine whether an area meets or exceeds federal ozone and PM2.5 air quality standards.[1]

Compliance with the federal ozone and PM2.5 standards is based on pollutant concentrations, measured at a comprehensive network of monitoring stations throughout California, averaged over three years. These three-year averages are called *design values*. Air quality monitoring in the years 2001 through 2003

[1] More about California's air quality monitoring network can be found on ARB's website at: *http://www.arb.ca.gov/aaqm/aaqm.htm*

was used by U.S. EPA to designate 15 areas in California as nonattainment for the federal 8-hour ozone standard. The San Joaquin Valley and South Coast Air Basin are also nonattainment for PM2.5.



A specific year's design value is averaged over three years. For example, the design value for the year 2001 reflects the averages for the years 1999, 2000, and 2001. Ozone design values are an average of the fourth highest concentrations for each of the last three years. Design values for the PM2.5 annual average reflect annual average (arithmetic mean) concentrations averaged over the last three years. The PM2.5 24-hour design values reflect the 98th percentile concentrations averaged over the last three years.

For the ozone standard, areas are classified based on the severity of the problem. In descending order in terms of magnitude of the problem, the classifications are *extreme*, *severe*, *serious*, *moderate*, and *marginal*. The Clean Air Act provides more time to meet the standard based on the severity of the problem. Based on its classification an area is given an attainment deadline. A special designation, called *basic*, refers to nonattainment areas governed under a separate set of requirements in the Clean Air Act. For PM2.5, U.S. EPA simply designated the South Coast and San Joaquin Valley as nonattainment without

application of the classification scheme used for PM10. This results in an attainment deadline of 2015.

Ozone Nonattainment Area	Nonattainment Designation (Current / Anticipated)	Attainment Year (Current / Anticipated)
South Coast Air Basin	Severe / Extreme	2021 / 2024
San Joaquin Valley	Serious / Extreme	2013 / 2024
Coachella Valley	Serious / Severe	2013 / 2019
Sacramento Region	Serious / Severe	2013 / 2019
Antelope Valley and Western Mojave Desert	Moderate / Severe	2010 / 2019 or 2021
Ventura County	Moderate / Serious	2010 / 2013 or 2019
Imperial County	Marginal	2007
San Francisco Bay Area	Marginal	2007

Basic Ozone Nonattainment Areas Attainment Year 2009-2014
Butte County
Central Mountain Counties
Eastern Kern County
San Diego County
Southern Mountain Counties
Sutter Buttes
Western Nevada County

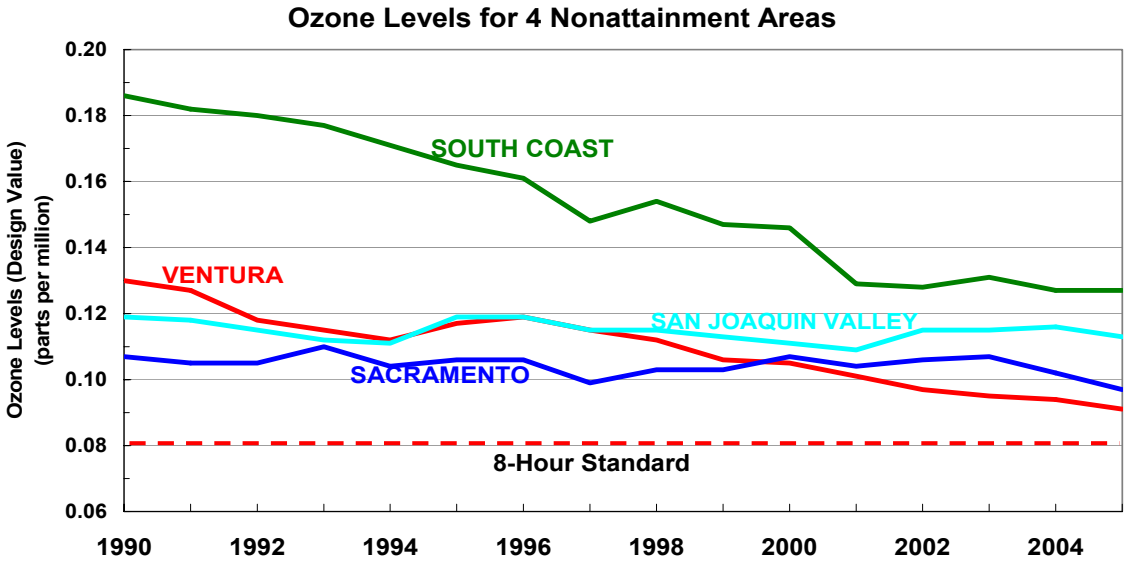
The above table lists the marginal through extreme nonattainment areas for the federal 8-hour ozone standard, while the table to the right lists the areas with the special basic ozone nonattainment designation. The Clean Air Act allows changing of nonattainment designations and the extension of the attainment deadline if the State believes a change is needed after analyzing the nature of the ozone problem and challenges to meet the standard. So the above table includes the current attainment designations, as well as designation changes that may be needed based on regional analyses.

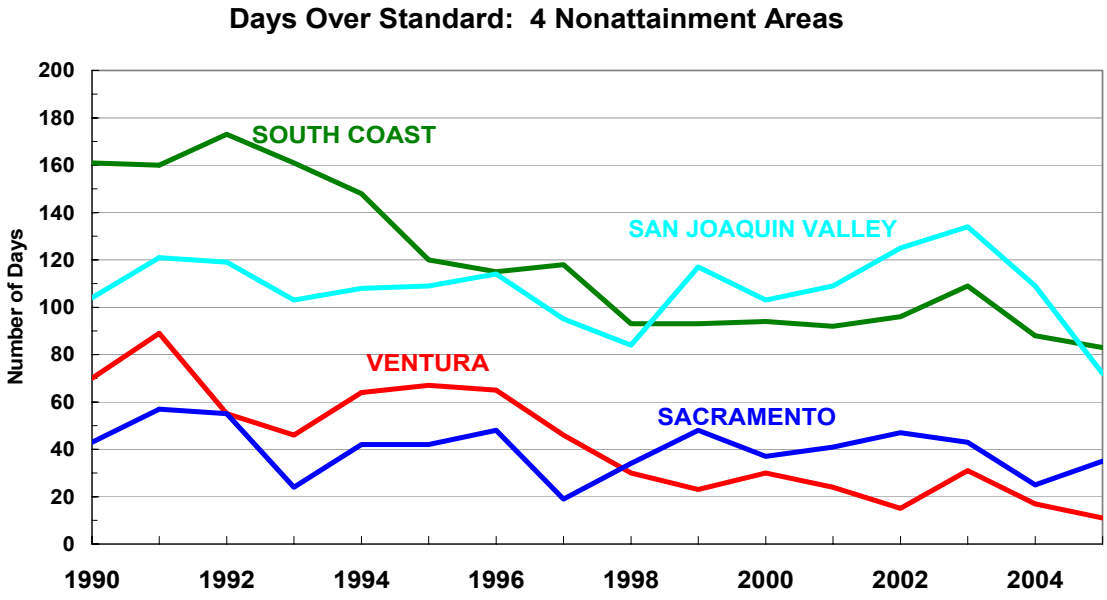
For this set of SIPs, U.S. EPA has provided guidance on how to interpret the attainment deadline as it relates to attainment demonstrations. The question arises because the deadlines are mid-year. The ozone attainment deadline is June 15 and the PM2.5 deadline is April 5 of the attainment year. To address the issue, U.S. EPA guidance calls for the analysis of attainment to be done for the year prior to the actual attainment year. So in this document we will be showing emission reduction targets and emissions for the year prior to the attainment year. For example, if the attainment year is 2024, we will be showing emission reduction targets and emissions for the year 2023.

Ozone Trends

A snapshot of four ozone nonattainment areas on the next page shows ozone levels (design values) relative to the federal standard and number of days over the standard since 1990. The ozone levels chart gives a sense of recent progress toward meeting the standard as well as how far we still have to go. The San Joaquin Valley and the South Coast have the most days exceeding the

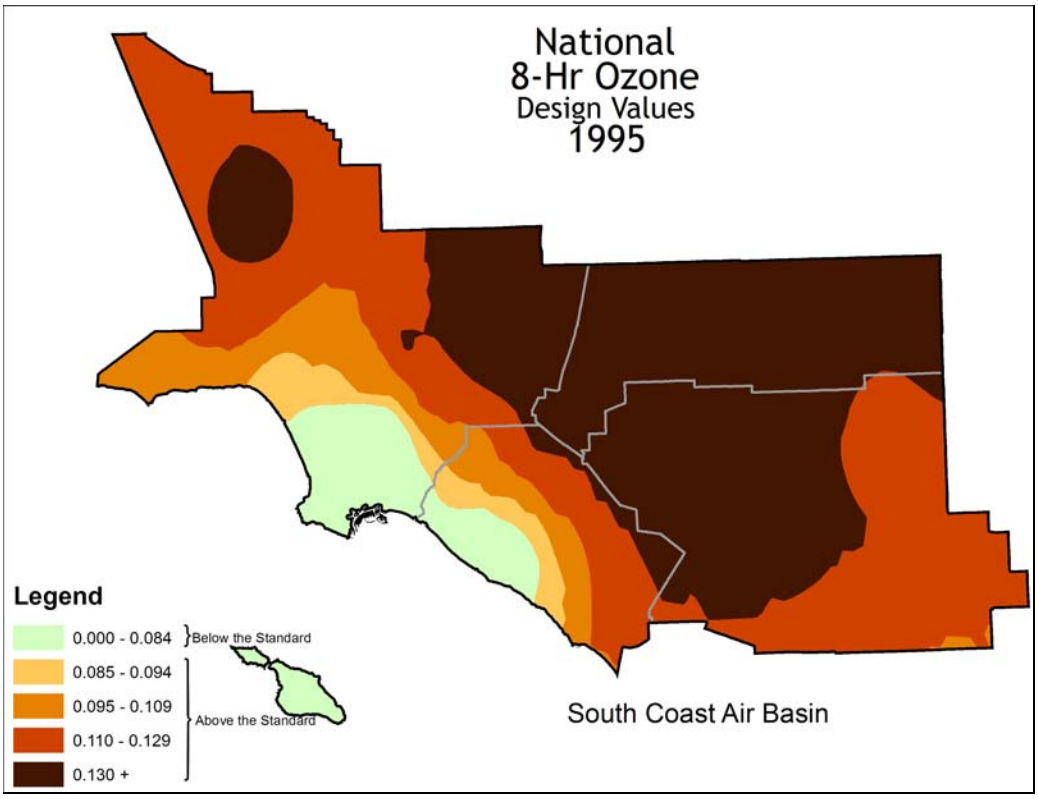
standard and the South Coast has the highest design values. In general, ozone trends show the greatest improvement in coastal areas like San Diego and Ventura.

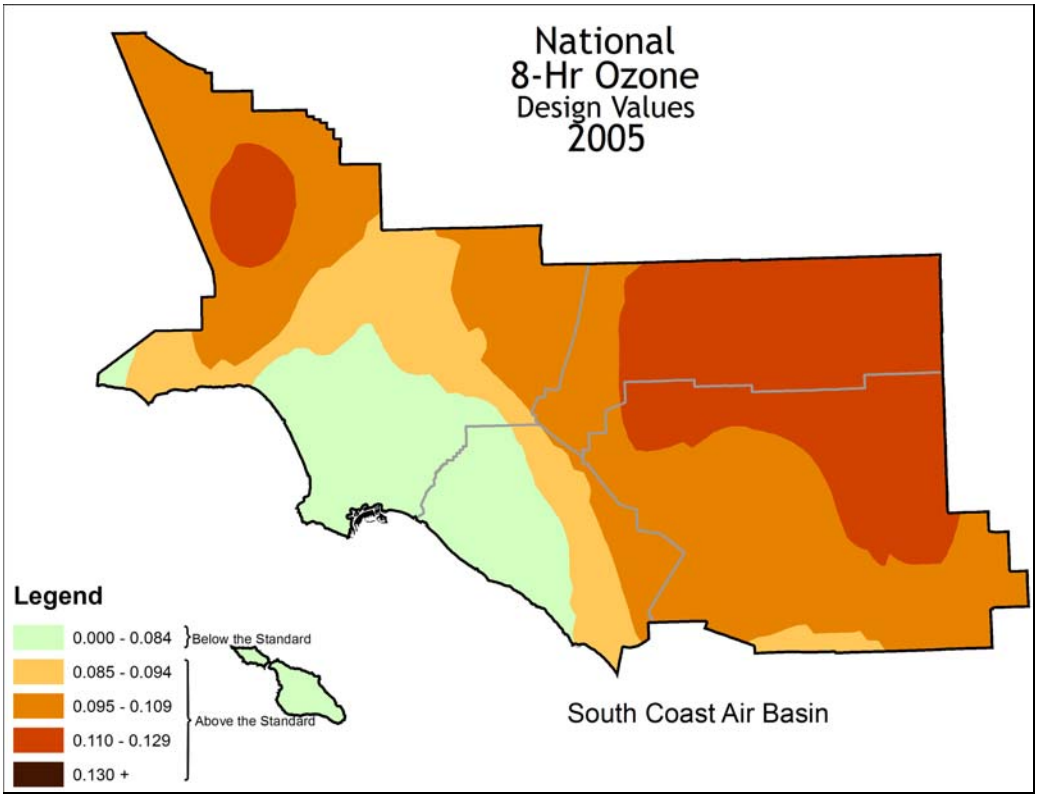




South Coast's ozone concentrations have been cut by about a third since 1990, but the region's design value is still 50 percent over the level of the standard and progress has slowed in recent years. Fifteen years ago, the highest values were widespread throughout the basin. Now, the number of communities within the basin experiencing the highest values is substantially smaller. The maps below show this progression of air quality progress.

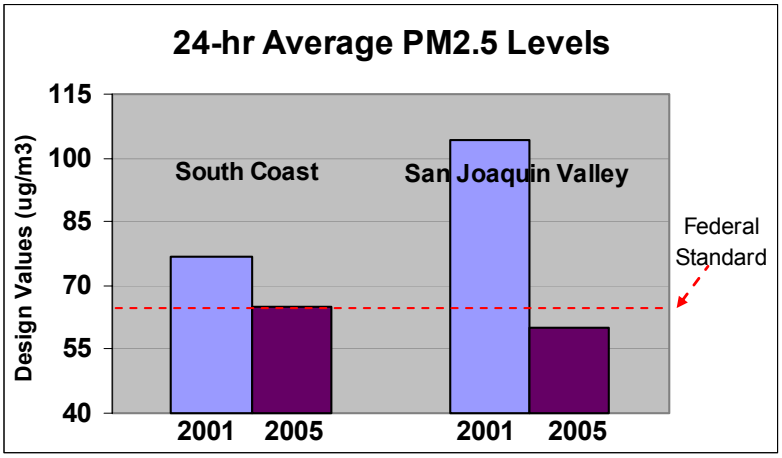
Ozone Air Quality Comparison – South Coast
1995 to 2005

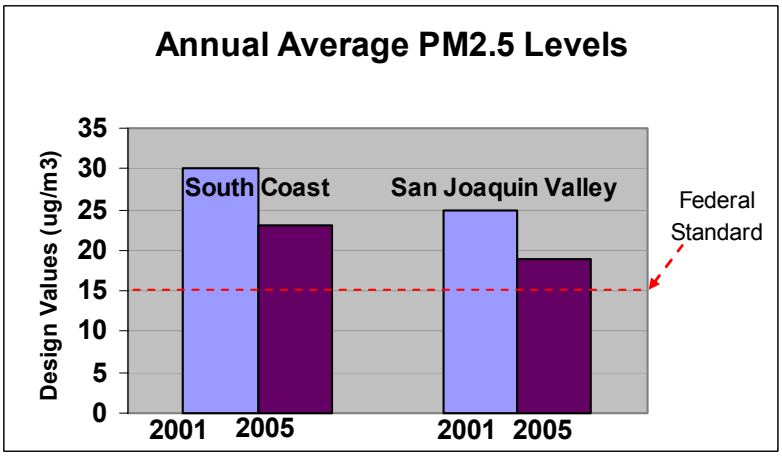




PM2.5 Trends

Both the South Coast and San Joaquin Valley are showing good progress toward PM2.5 attainment. As of 2005, both regions are meeting the 24-hour standard. In addition, annual average PM2.5 design values have declined by 25 percent since 2001. In terms of the remaining challenge, the South Coast levels are still about 50 percent above the standard, and the San Joaquin Valley levels are about 25 percent above the standard.





Development of State Strategy

In developing our proposed statewide emission reduction strategy, ARB staff worked closely with air districts on attainment demonstrations for ozone for each area and on a PM2.5 attainment demonstration for the South Coast. In that process, emissions inventories are developed and air quality models are used to establish a region's "carrying capacity" and to calculate the additional emission reductions needed for attainment.

The emission reduction targets serve three purposes. First, they provide an indication of how far the existing control program will take each region toward

attainment and if additional reductions from new measures are needed. Second, they indicate how much time a region may need to reach the standards and if a classification change to a later attainment date is likely needed. And third, they provide a benchmark for designing new emission reduction measures.

The magnitude of the attainment challenges in the South Coast and San Joaquin Valley, as shown in the next chapter, are the drivers for ARB staff's proposed statewide strategy. The new SIP measures are also needed for the Sacramento region, the Coachella Valley, and the Antelope Valley and Western Mojave Desert nonattainment area. California's other ozone nonattainment areas, including San Diego and Ventura, are projected to attain by their assigned deadline based on the benefits of previously adopted SIP measures.

Given the severity of the ozone problems in the South Coast and San Joaquin Valley, both regions have indicated in their draft air quality plans that they will be requesting a reclassification to extreme with attainment deadlines of 2024. The 2015 PM2.5 deadline and the South Coast PM2.5 carrying capacity framed staff's analysis of new near-term measures. The other key driver for developing new SIP strategies is to reach ozone attainment in both regions as quickly as possible.

Chapter 2 will summarize the process of determining the emission reduction targets and show those targets for the South Coast and San Joaquin Valley. The process consists of developing an emissions inventory and performing data analyses and air quality modeling based on that inventory to establish the emissions limits that ensure air quality standards are met.

Air Pollution Transport

Air pollution transport, by definition is quite simple – air movements carry pollutants from one area to another. In reality, air pollution transport is a very complex phenomenon. It is three-dimensional and can occur at ground level or aloft in upper air levels. With modeling for the State being split into two modeling domains – one for Northern and Central California and one for Southern California – transport relationships between air districts within these large domains are implicitly captured within the models. This is the mechanism ARB uses in its oversight role to ensure transport impacts on downwind areas are addressed for purposes of both State and federal air quality standards. In terms of attainment demonstrations, inputs to the modeling for a downwind area include forecasted emission reductions in upwind areas. This way the attainment demonstration takes into account the shared responsibility for reducing emissions in regions where air pollution transport can at times be significant.

Other Programs

In addition to SIPs, ARB has multiple plans and programs to reduce air pollution throughout California. Emission reduction strategies from many of these programs are taken into account in the ozone and PM2.5 SIPs.

ARB Goods Movement Plan

The Emission Reduction Plan for Ports and Goods Movement in California, approved by ARB in April 2006, is one of the main contributors of new measures necessary to meet federal air quality standards. Most goods that move within and through California do so by truck. Ships are the largest source of SOx emissions in the State. Heavy-duty trucks are the largest statewide source of NOx emissions. These air pollution realities make it impossible to tackle the PM2.5 challenge without addressing goods movement emissions. Likewise, emission reduction targets for ozone will not be met without reducing emissions related to goods movement.

The strategies included in the goods movement emission reduction plan target ships and trucks, as well as the other three main sources of goods movement emissions: harbor craft, cargo handling equipment, and locomotives. By 2020, these strategies will cut statewide goods movement emissions of NOx by 63 percent, SOx emissions by 78 percent, and will also reduce the statewide health risk from goods movement-related diesel particulate matter 85 percent.

Work on many of the strategies in the goods movement emission reduction plan is underway and serves as the starting point for near-term actions to meet the emission reduction targets for the SIPs. These strategies will provide essential new emission reductions needed for regional attainment, while they reduce the air pollution-related health risk for those who live near our ports, railyards, distribution centers, and other goods movement facilities.

ARB Diesel Risk Reduction Plan

An important source of directly emitted PM2.5 is diesel exhaust. The particulate matter from diesel-fueled engines (diesel PM) has been singled out as a particularly harmful pollutant and identified as a toxic air contaminant by the Air Resources Board in 1998. Nearly 70 percent of the known cancer risk caused by air toxics is attributed to diesel PM. In 2000, ARB adopted a plan to reduce diesel PM emissions 85 percent by 2020, and has since adopted a number of regulatory measures to reduce diesel PM emissions statewide. Additional measures are under development. Diesel PM control measures in the plan are reducing both direct diesel PM and NOx emissions through a combination of engine retrofits and replacements. Upcoming mobile source fleet measures to reduce diesel PM and NOx emissions are a critical part of the new SIP strategy as well the Diesel Risk Reduction Plan.

Environmental Justice

The SIPs consist of strategies designed to bring a region's air quality into compliance with federal standards. SIPs must be designed to ensure air quality standards throughout the entire region, so achieving air quality standards provides public health benefits to every community. This makes SIP implementation important to meeting ARB's community health and environmental justice goals. As part of our environmental justice program, ARB has initiated air quality studies in several communities and continues to focus resources on mobile source enforcement in environmental justice communities. ARB's Air Quality and Land Use Handbook, approved by ARB in May 2005, provides guidance to help improve local land use decisions that can negatively impact public health at the community level.

ARB's SIP strategies have a significant nexus to community health due to the emphasis on cleaning up the legacy fleets of diesel engines. Much of the large equipment and vehicles that help construct our buildings and highways and move our goods are not well controlled and have very long lives. Adopting rules to clean up these fleets will have an immediate and significant effect on the communities where these sources are concentrated.

Regional Haze

The same particulate air pollutants that affect public health also extinguish and scatter light, thereby obscuring visibility. The federal Clean Air Act set the far-reaching goal of achieving natural visibility conditions by 2064 in the nation's most treasured parks and wilderness areas. Of the 156 designated areas, 29 are in California, managed by the National Park Service and the U.S. Forest Service. Therefore California is working in concert with fourteen other western states to reduce controllable emissions of particulates so that regional haze is reduced in the western region of the country. In 1999, the U.S. Environmental Protection Agency published rules to guide the preparation of Regional Haze State Implementation Plans to reduce regional haze.

ARB is currently preparing the first regional haze plan for the entire State, for transmittal to EPA by the December 17, 2007 deadline. General trends in California since the 1990s show that emission controls are improving visibility in our parks and wilderness areas. The regional haze plan will show how these controls constitute reasonable progress along the path to natural visibility. In 2012, ARB will conduct a mid-course review of measured visibility changes and analyze how emission reductions implemented to achieve the 8-hour ozone and the PM2.5 standards will move the State further along the path to natural visibility in the future.

Climate Change

ARB's implementation of the Global Warming Solutions Act of 2006 (AB 32) is a major new effort just underway. These activities, including future rulemaking, will occur on a parallel but separate track as we proceed with implementation of our SIP strategies. The statutory requirements and timelines are different, so it is not appropriate to include potential co-benefits of greenhouse gas strategies in SIP documents at this point. However, as greenhouse gas reduction measures are developed and adopted, ARB staff will do the necessary technical work to determine the impact on ozone and PM2.5 precursor pollutants.

2. TECHNICAL FOUNDATION

Emissions Inventory Overview

Developing attainment strategies requires an understanding of the sources of pollution, the quantities emitted, their geographical distribution, and how air pollution controls and growth will impact future emission levels. There are multiple types of emission inventories used in air quality programs including annual averages, seasonal, and day-specific modeling inventories. SIPs rely on region specific inventories that may differ from the statewide picture. In the regulatory development process emission inventories are typically refined since inventory data is a key input for cost-effectiveness evaluations. This is an important inventory improvement mechanism, and ARB staff incorporates these updates into the statewide inventory.

The emissions inventory serves three principal roles in the SIP process:

- It provides a primary input to the modeling necessary to determine the emission reductions needed for attainment;
- It supplies comprehensive emissions information for the development of emission reduction strategies;
- And after the SIP is approved, it is used to track progress of the emission reduction commitments outlined in the plan.

California is a diverse State with many sources of air pollution. ARB, in cooperation with local air districts, maintains a statewide emissions inventory. The inventory is constructed based on four major emission categories:

- Stationary Sources -- generally industrial facilities, which can be identified by a name and location.
- Areawide Sources -- either small individual sources, such as residential fireplaces, or widely distributed sources that cannot be tied to a single location, such as consumer products and dust from unpaved roads.
- On-Road Mobile Sources -- includes on-road cars, trucks, buses, etc.
- Off-Road Mobile Sources -- includes off-road vehicles such as boats, off-road recreational vehicles, aircraft, trains, ships, industrial and construction equipment, farm equipment, and other equipment.

The statewide emissions inventory developed by ARB and the local air districts includes all the main sources of emissions – all of the many on-road and off-road mobile sources and all the various stationary and areawide sources. Estimating the amount of emissions statewide and in each region is done by summing the emissions from each source. The statewide inventory for the 2007 SIP development uses ARB's November 2006 on-road motor vehicle model (EMFAC) and ARB's off-road mobile source model. Stationary source emissions are

provided by local air districts. The regional SIP inventories are discussed in Chapter 5, Regional SIP Summaries.

Precursor Pollutants

Air pollutants that react to form ozone and PM2.5 in the air are called precursor pollutants. For ozone, the main precursor pollutants are nitrogen oxides (NOx) and reactive organic gases (ROG). There are four main precursors of PM2.5: NOx, ROG, sulfur oxides (SOx) and ammonia (NH3). PM2.5 can also be directly emitted into the atmosphere (direct PM2.5) in various forms that include smoke from fires, dust from paved and unpaved roads, and particle emissions from the burning of fossil fuels.

PM2.5 pollution is a complex mixture and air quality modeling is used to assess the relative effectiveness of reducing each precursor pollutant as well as directly emitted PM2.5. Current data analysis and air quality modeling indicates that two of the four precursors, NOx and SOx, are significant in reducing PM2.5 concentrations in the South Coast, and that the PM2.5 emission control strategy would be served best by focusing on reducing emissions of these two precursor pollutants. There is also a small PM2.5 benefit from ROG emission reductions, but benefits from ammonia emission reductions were found to be insignificant. Reducing direct PM2.5 is also an effective strategy according to recent modeling.

NOx. Nitrogen oxide emissions are produced by the combustion of fuels in engines, furnaces, or fires. Today mobile sources make up about 85 percent of the total statewide NOx emissions. This percentage decreases over time as motor vehicle fleets become cleaner. Emissions from less clean sources like locomotives, ships, and aircraft continue to grow. Stationary sources of NOx include combustion processes in industries such as manufacturing, food processing, electric utilities, and petroleum refining. Areawide sources of NOx, which include waste burning and residential fuel combustion, contribute a smaller portion of total NOx emissions. Air quality science indicates that reductions of NOx are more beneficial than reductions of other pollutants to help meet both ozone and PM2.5 standards, and therefore NOx is a major focus of the State Strategy.

ROG. Reactive organic gases result primarily from incomplete fuel combustion and the evaporation of chemical solvents and fuels. Stationary sources of ROG include processes that use solvents such as dry cleaning, degreasing, and coating operations. Today mobile sources are the largest ROG emissions category. However, other ROG categories become relatively more important over time. Areawide ROG sources which grow directly with population begin to dominate in the future so that by 2020 consumer products is the largest source category.

SOx. Sulfur oxide emissions are dominated by the mobile source category of ships and commercial boats. Evaporative losses from petroleum refining (a stationary source) are another significant source of SOx. The other sources that make up 5 percent or more of the SOx inventory are locomotives and mining and cement manufacturing.

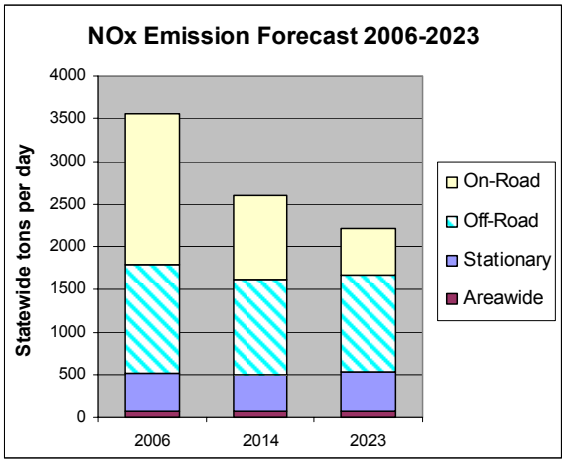
Direct PM2.5. Directly emitted PM2.5 comes mainly in the form of smoke, soot, and dust particles. Major sources include managed burning and agricultural burning; dust generated by vehicles traveling on paved and unpaved roads, residential fireplaces, cooking and fuel combustion; and particle emissions from diesel-fueled engines on trucks, ships, and construction equipment. While soot from diesel engines is not a major portion of the entire direct PM2.5 emissions inventory, it is a major health concern, as it is a toxic air contaminant that can cause premature death.

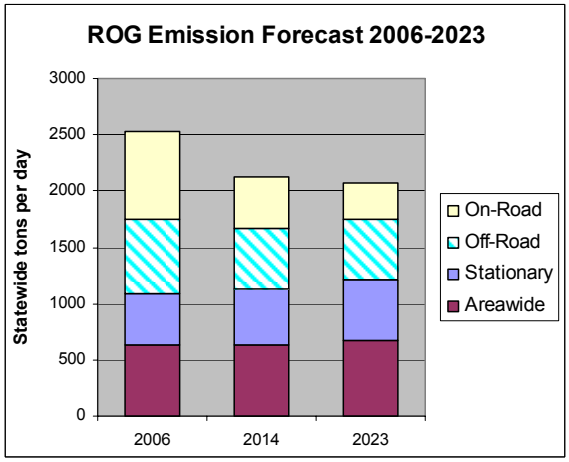
Forecasting Future Emissions

Estimates of projected future emissions depend on two independent variables: growth and control. Different methods are used to estimate the future growth of emission sources based on their type. And future emission controls are incorporated into the projected emissions for each source category based on when the controls are implemented, how much the controls reduce emissions, and how many units (vehicles, consumer products, etc.) are affected.

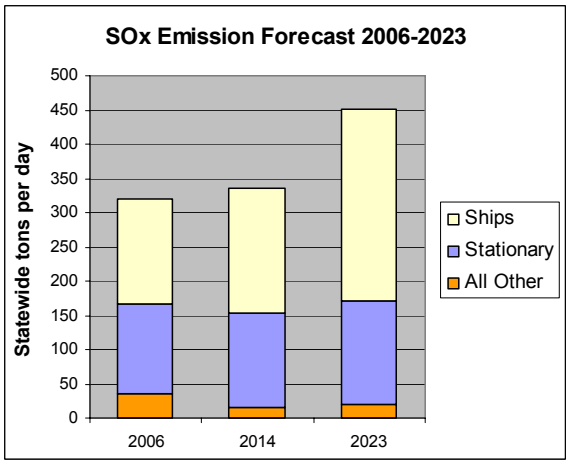
The charts on the next page show the change in total projected statewide emissions for NOx, ROG, and SOx from 2006 to 2023 and the relative emissions change in each of these emission source categories. They reflect projected growth in each category combined with the benefits of the existing control program (those emission controls adopted prior to 2007). For example, SOx emissions as a category continue to grow due to ship emission increases. This makes ship SOx emissions a high priority for control in the new SIP strategy. NOx and ROG emissions are decreasing as a result of existing control programs despite substantial growth in population, travel, and the economy.

ARB uses two computer models to simulate and forecast emissions for on- and off-road sources. For cars, sport utility vehicles, minivans, and trucks, ARB used EMFAC2007. For off-road vehicles and equipment, ARB used OFFROAD2007. Both models were released for public use in November 2006 after a multi-year development process. As required by federal guidance, EMFAC2007 uses the latest fleet information for vehicles age and population. The data is developed from the California Department of Motor Vehicle registration data through 2005. For SIP purposes, as required by State law, vehicle activity is based on local transportation agency projections, or California Department of Transportation data, if local data are not available.





Note: "Off-Road" includes trains, planes, and ships, as well as all other off-road vehicles and equipment.



Top Emission Sources

While the top emission categories are mobile sources in all California's nonattainment areas, there is variability in the relative contribution of different sources by region. This makes the overall statewide emission reduction strategy more challenging and will affect the priorities of local control plans. For example, controlling the emissions from ocean-going vessels will have a tremendous impact on SOx emissions in the South Coast and therefore is essential to that region's PM2.5 control plan. Reducing SOx from ships has much less consequence in the San Joaquin Valley, so increased NOx reductions from combustion sources will become even more important for the Valley's PM2.5 control strategy. The tables on the next two pages show the top emission sources of both NOx and ROG in the South Coast and the San Joaquin Valley.

Here are some things we have learned by analyzing the emissions inventory for these two areas:

- South Coast NOx emissions are significantly impacted by goods movement, with the ships, trains, trucks, and off-road equipment that move goods contributing about 30 percent of all South Coast NOx emissions. Aircraft NOx emissions are also increasing.

- The impact of goods movement in the San Joaquin Valley is felt mostly by the emissions contribution of heavy-duty trucks, which are projected to remain the largest NOx emitter through 2023.

- Emissions of NOx from manufacturing and industrial sources in the San Joaquin Valley become increasingly significant as emissions from mobile sources decline in the future.

- The large population in the South Coast is the main reason why consumer product emissions are projected to become the number one ROG emissions source by 2014.

- San Joaquin Valley ROG emissions are significantly impacted by agricultural sources such as livestock waste.

- The existing emission control program will cut heavy-duty truck NOx emissions about 70 percent in the San Joaquin Valley and South Coast by 2023, but they need to be cut even more by new strategies to attain ozone and PM2.5 standards.

- Mobile sources under federal and international jurisdiction (like ships, locomotives, and aircraft) contribute an increasingly greater proportion of total emissions, especially NOx, in future years as emission increases due to growth overwhelm the existing control program, while emissions of mobile sources under State jurisdiction decrease due to stringent controls.

South Coast Air Basin – Top Sources of NOx

Summer emissions, tons per day

Source Category	2006	2014	2023
HEAVY DUTY DIESEL TRUCKS	259	140	73
PASSENGER VEHICLES	204	101	53
OFF-ROAD EQUIPMENT (CONSTRUCTION AND MINING)	120	81	41
OFF-ROAD EQUIPMENT (COMMERCIAL, INDUSTRIAL)	87	53	35
SHIPS AND COMMERCIAL BOATS	75	87	116
GASOLINE-FUELED COMMERCIAL TRUCKS	36	24	17
LOCOMOTIVES	31	23	28
RESIDENTIAL FUEL COMBUSTION	18	16	14
MANUFACTURING & INDUSTRIAL (BOILERS, ENGINES)	17	15	15
SERVICE AND COMMERCIAL (BOILERS, ENGINES)	16	12	11
RECREATIONAL BOATS	16	17	18
AIRCRAFT	16	22	29
TOTAL OF TOP CATEGORIES	**896**	**589**	**450**
TOTAL	**971**	**650**	**505**
TOP CATEGORIES PERCENT OF TOTAL	**92%**	**91%**	**89%**

San Joaquin Valley – Top Sources of NOx

Summer emissions, tons per day

Source Category	2006	2014	2023
HEAVY DUTY DIESEL TRUCKS	285	155	75
FARM EQUIPMENT (COMBINES AND TRACTORS)	60	37	17
PASSENGER VEHICLES	58	31	16
MANUFACTURING & INDUSTRIAL (BOILERS, ENGINES)	39	44	48
OFF-ROAD EQUIPMENT (CONSTRUCTION AND MINING)	34	22	12
OFF-ROAD EQUIPMENT (COMMERCIAL, INDUSTRIAL)	34	23	15
LOCOMOTIVES	22	21	22
AGRICULTURAL IRRIGATION PUMPS	16	7	5
OIL AND GAS PRODUCTION (COMBUSTION)	11	10	10
COGENERATION (ELECTRICITY GENERATION AND HEAT RECOVERY)	9	7	8
GASOLINE-FUELED COMMERCIAL TRUCKS	9	7	6
FOOD AND AGRICULTURE (CROP PROCESSING AND WINERIES)	9	9	9
GLASS AND RELATED PRODUCTS	8	9	11
TOTAL OF TOP CATEGORIES	**595**	**381**	**253**
TOTAL	**650**	**425**	**300**
TOP CATEGORIES PERCENT OF TOTAL	**92%**	**90%**	**84%**

Note: Emissions do not include impact of State Strategy proposed new measures.

South Coast Air Basin – Top Sources of ROG

Summer emissions, tons per day

Source Category	2006	2014	2023
PASSENGER VEHICLES	207	112	76
CONSUMER PRODUCTS	101	103	110
RECREATIONAL BOATS	64	53	51
OFF-ROAD EQUIPMENT (LAWN AND GARDEN)	52	40	38
ARCHITECTURAL COATINGS (PAINTS AND THINNERS)	31	29	31
OFF-ROAD EQUIPMENT (COMMERCIAL, INDUSTRIAL)	28	15	12
PETROLEUM MARKETING (GASOLINE EVAPORATIVE LOSSES)	27	28	31
COATINGS (PAINTS AND THINNERS - NON ARCHITECTURAL)	27	25	28
GASOLINE-FUELED COMMERCIAL TRUCKS	24	13	8
GAS CANS	21	10	7
OFF-ROAD EQUIPMENT (CONSTRUCTION AND MINING)	20	12	8
TOTAL OF TOP CATEGORIES	**600**	**441**	**399**
TOTAL	**732**	**567**	**534**
TOP CATEGORIES PERCENT OF TOTAL	**82%**	**78%**	**75%**

San Joaquin Valley – Top Sources of ROG

Summer emissions, tons per day

Source Category	2006	2014	2023
PASSENGER VEHICLES	62	37	24
WASTE DISPOSAL/COMPOSTING	57	72	80
LIVESTOCK WASTE (DAIRY CATTLE)	40	33	41
OIL AND GAS PRODUCTION (EVAPORATIVE LOSSES/FLARING)	28	26	23
CONSUMER PRODUCTS	24	26	30
PESTICIDES	22	20	20
HEAVY DUTY DIESEL TRUCKS	20	13	8
RECREATIONAL BOATS	20	17	17
FOOD AND AGRICULTURE (CROP PROCESSING AND WINERIES)	13	12	13
ARCHITECTURAL COATINGS (PAINTS AND THINNERS)	11	12	13
OFF-ROAD EQUIPMENT (COMMERCIAL, INDUSTRIAL)	10	6	4
FARM EQUIPMENT (COMBINES AND TRACTORS)	10	5	3
TOTAL OF TOP CATEGORIES	**317**	**279**	**277**
TOTAL	**452**	**410**	**414**
TOP CATEGORIES PERCENT OF TOTAL	**70%**	**68%**	**67%**

Note: Emissions do not include impact of State Strategy proposed new measures.

Setting the Emission Reduction Targets

U.S. EPA rules require the use of air quality modeling to set emission reduction targets. Modeling is also helpful in guiding the selection of the most effective pollutants to control. To set ozone emission reduction targets, air quality modeling has been conducted separately for two overarching areas. One area is Northern and Central California, encompassing the San Joaquin and Sacramento Valleys, the Bay Area and the Sierra Nevada Mountains. ARB staff has been doing this modeling. The other area is Southern California, including the South Coast Air Basin, Ventura County, Imperial County, and the Mojave Desert area. The South Coast air district has been doing this modeling. The South Coast air district has also been performing the air quality modeling to set its PM2.5 target.

Weight of Evidence Analysis

A Weight of Evidence analysis provides a set of complementary analyses that supplements the SIP-required modeling. These analyses can include consideration of measured air quality, emissions, and meteorological data, evaluation of other air quality indicators, and additional air quality modeling. A Weight of Evidence approach looks at the entirety of the information at hand to provide a more informed basis for the attainment strategy. While all analysis methods have inherent strengths and weaknesses, examining an air quality problem in a variety of ways increases the confidence one has in the results. This approach also provides a better understanding of the overall problem and the level and mix of emissions controls needed for attainment.

The discussion in Chapter 4 about South Coast PM2.5 pollution is a weight of evidence approach. More detailed weight of evidence analysis will be included in ARB staff reports on the local air district plans and in the local plans themselves.

South Coast Ozone Emission Reduction Targets

Under State law the South Coast air district is responsible for setting carrying capacities for the South Coast Air Basin. While the carrying capacities result in large emission reduction targets for both NOx and ROG, the South Coast modeling indicates that NOx reductions are more effective at reducing ozone in the long run, although ROG reductions are still needed to maximize progress. In fact, the air district modified the South Coast Air Basin carrying capacity in its February 2007 draft air plan, relying even more heavily on NOx reductions than in its earlier estimates.

The emission reduction targets based on the February 2007 carrying capacities are presented below.

Draft South Coast Ozone Emission Reduction Targets

(tons per day)	NOx	ROG
2006 Emissions Inventory	972	732
Carrying Capacity	114	420
Emission Reduction Target	**858**	**312**

It will be important to revisit the relative carrying capacities in subsequent SIPs to factor in inventory improvement, updated modeling, and control measure development.

South Coast PM2.5 Emission Reduction Targets

As discussed previously, unlike ozone, PM2.5 consists of many different components. These components can vary by location and season, with both local and regional scale contributions. This complexity and variability presents a unique challenge in modeling for attaining the annual standard, and introduces a higher level of uncertainty in the results. In addition, while there is a long history and body of experience for ozone model application, air quality modeling for PM2.5 is relatively more recent, and it has not been applied as extensively. ARB will continue to work with air districts on efforts to refine PM2.5 modeling techniques.

Draft South Coast PM2.5 Emission Reduction Targets

(tons per day)	NOx	ROG	SOx	Direct PM2.5
2006 Emissions Inventory	972	732	63	101
Carrying Capacity	443	469	19	88
Emission Reduction Target	**529**	**263**	**44**	**13**

San Joaquin Valley Emission Reduction Targets

ARB staff has been using photochemical models for Northern and Central California developed as part of the multi-million dollar Central California Air Quality Study. This modeling continues to confirm that NOx is the key to long term attainment in the San Joaquin Valley. (This is also true for the Sacramento Valley and the rural regions downwind.) ROG looks beneficial especially in the near term for maximum progress and to supplement NOx reductions long term.

The ozone emission reduction targets for San Joaquin Valley are shown in the following table. The ROG carrying capacity is implicit, based on the much larger benefit of NOx reductions demonstrated by the modeling.

San Joaquin Valley Ozone Emission Reduction Targets

(tons per day)	**NOx**	**ROG**
2006 Emissions Inventory	650	454
Carrying Capacity	160	342
Emission Reduction Target	**490**	**112**

San Joaquin Valley PM2.5 modeling is underway and carrying capacities and emission reduction targets will be developed later in 2007 for a PM2.5 plan that is due to U.S. EPA in April 2008.

3. ARB's 2007 SIP STATE STRATEGY

The State Strategy maps out how to achieve the emission reductions necessary to meet federal air quality standards. The two main emission reduction components of the State Strategy are the adopted SIP measures and proposed new measures. The adopted SIP measures include those adopted through 2006. Proposed new measures include those to be adopted after 2006.

Responsibility for implementing emission reduction measures is shared between the agencies with primary responsibility for controlling air pollution in California: the Air Resources Board, 35 local air pollution control and air quality management districts, and the U.S. Environmental Protection Agency. However, given the current status of statewide emissions, ARB has the lion's share of responsibility, followed by U.S. EPA.

Agency Roles in SIP Measure Development

Local Measures

Local air districts are primarily responsible for controlling emissions from stationary and areawide sources (with the exception of consumer products) through rules and permitting programs. Examples include industrial sources like factories, refineries, and power plants; commercial sources like gas stations, dry cleaners, and paint spray booth operations; residential sources like fireplaces, water heaters, and house paints; and miscellaneous non-mobile sources like emergency generators. Districts also inspect and test fuel vapor recovery systems to check that such systems are operating as certified.

State Measures

ARB is responsible for controlling emissions from mobile sources (except where federal law preempts ARB's authority) and consumer products, developing fuel specifications, establishing gasoline vapor recovery standards and certifying vapor recovery systems, providing technical support to the districts, and overseeing local district compliance with State and federal law. The Department of Pesticide Regulation is responsible for control of agricultural, commercial and structural pesticides, while the Bureau of Automotive Repair runs the State's Smog Check programs to identify and repair polluting cars.

Federal Measures

U.S. EPA has the authority to control emissions from mobile sources, including sources all or partly under exclusive federal jurisdiction (like interstate trucks, some farm and construction equipment, aircraft, marine vessels, and locomotives based in this country). U.S. EPA also has oversight authority for state air programs as they relate to the federal Clean Air Act. International organizations develop standards for aircraft and marine vessels that operate outside the U.S.

Federal agencies have the lead role in representing the U.S. in the process of developing international standards.

Adopted SIP Measures

Many measures already adopted by local, State and federal agencies are currently reducing emissions. Many will do so at an accelerated rate in the future. Some adopted measures are scheduled to go into effect years hence. Adopted SIP measures will have a very significant impact on emissions and air quality between now and the target dates (attainment years) in the areas of the State that do not meet federal ozone and PM2.5 air quality standards.

Adopted SIP measures have been developed over the years through the combined efforts of air pollution regulators – with a foundation of ARB's mobile source and fuels programs, complementary national actions for pollution sources under federal authority, and local air district programs for industrial and commercial sources -- as well as transportation plans that integrate transit and other alternatives to solo vehicle travel. ARB has adopted 46 emission-reducing control measures since the approval of the 1994 1-hour ozone SIP. These measures, shown on the table on Page 38 entitled "Air Resources Board SIP Control Measures (1994-2006)," comprise the bulk of the benefits of the adopted measures.

Mobile Sources

Cleaner Engines and Fuels

California has dramatically tightened emission standards for on-road and off-road mobile sources and the fuels that power them. The table below shows how significantly the adopted measures have controlled emissions from new engines for the major categories of mobile sources.

California's emission control program for on-road motor vehicles is the strongest in the world. New cars are now 99 percent cleaner than their uncontrolled counterparts. Trucks are now 90 percent cleaner, and will be 98 percent cleaner by 2010.

Working in concert with the U.S. EPA, standards for goods movement sources have also been tightened dramatically. By requiring low-sulfur fuel, SOx emissions from ship auxiliary engines will be cut 96 percent by 2010. New locomotive engines are now 50-60 percent cleaner. Harbor craft emission standards were cut roughly in half. And new cargo handling equipment will be 95 percent cleaner by 2011.

Impact of Existing Standards and Emission Limits

Source	Controlled Since	Level of Control*
ON-ROAD		
Passenger Cars	1961	**99% in 2006 (ROG + NOx)**
Trucks and Buses	1988	**90% by 2007, 98% by 2010 (NOx)** **98% by 2007 (PM)**
Motorcycles	1975	**88% by 2008 (ROG + NOx)**
GOODS MOVEMENT		
Ship Auxiliary Engines (fuel)	2000	**96% (SOx), 83% (PM) by 2010**
Locomotives	1973	**60% in 2005 (ROG+NOx)**
Harbor Craft	2004	**50% in 2004 (NOx)**
Cargo Handling Equipment	2005	**95% by 2011-2012 (ROG+NOx, PM)**
OFF-ROAD SOURCES		
Large Off-Road Equipment	1996	**98% by 2015 (ROG + NOx)**
Personal Water Craft	1990	**88% by 2010 (ROG)**
Recreational Boats	1990	**89% by 2010 (ROG)**
Lawn & Garden Equipment	1990	**82-90% by 2010 (ROG)**
AREAWIDE SOURCES		
Consumer Products	1989	**50 categories controlled 50% (ROG)**

* Level of emissions control compared to uncontrolled source.

California has also drastically lowered standards for off-road sources, from lawn and garden equipment, to recreational vehicles and boats, to construction equipment and other large off-road sources. From 2010 through 2014, these new off-road sources will be manufactured with 80-98 percent fewer emissions than their uncontrolled counterparts.

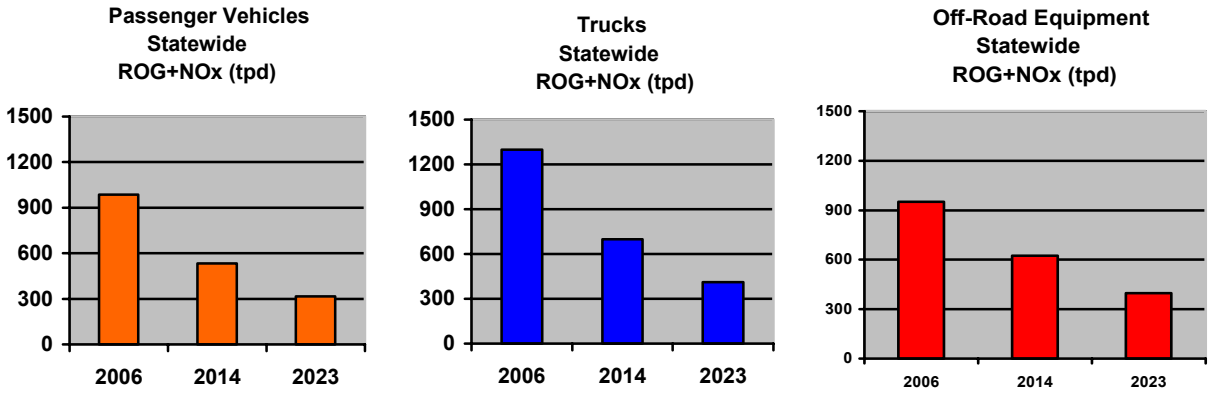
ARB has worked closely with U.S. EPA to regulate large diesel, gasoline and liquid petroleum gas equipment – where authority is split between California and the federal government – and by 2014, new large off-road equipment will be 98 percent cleaner. ARB has also made great strides in reducing emissions from the smaller engines under State control, like those used in lawn mowers and jet skis, recreational vehicles and boats. From 2010 to 2015, these new off-road sources will be manufactured with 82-90 percent fewer emissions than their uncontrolled counterparts.

Air Resources Board SIP Control Measures (1994-2006)

Air Resources Board Action	Date
In-Use Diesel Agricultural Engine Requirements	2006
Consumer Product Lower Emission Limits	2006
Zero Emission Bus Rule Amendments	2006
Off-Highway Recreational Vehicle Regulation Amendments	2006
Forklifts and Other Spark-Ignition Equipment Regulation	2006
Border Truck Inspection Program Protocol Improvements	2006
Ship Auxiliary Engine Cleaner Fuel Requirements	2005
Diesel Cargo Handling Equipment Rule	2005
Public and Utility Diesel Truck Fleet Rule	2005
Heavy-Duty Sleeper Truck Idling Limits	2005
Portable Fuel Container Requirements	2005
Transit Bus Rule Additions	
Off-Road Diesel Engine Tier 4 Standards	2004
Harbor Craft and Locomotive Clean Diesel Fuel Requirement	2004
Idling Limits for Trucks	2004
Consumer Products Rule	2004
Chip Reflash to Detect Truck Emission Control System Failure	2004
Transportation Refrigeration Unit Rule	2004
Portable Diesel Engine Emission Standards	2004
Stationary Diesel Engine Regulation	2004
Solid Waste Collection Vehicle Regulation	2003
Lawn and Garden Equipment Emission Standards	2003
Low Sulfur Diesel Fuel Regulation	2003

Air Resources Board Action	Date
California ZEV Requirement Update	2003
Heavy-Duty Gas Truck Emission Standards	2002
Heavy-Duty Diesel Truck Emission Standards	2001
Inboard and Sterndrive Marine Engine Emission Standards	2001
Architectural Coatings Suggested Control Measure	2000
Urban Transit Bus Fleet Rule	2000
Off-Road Diesel Equipment Emission Standards	2000
Reformulated Gas MTBE Phase Out	1999
Consumer Product Emission Limits	1999
Portable Fuel Can Regulation	1999
Marine Pleasurecraft Emission Standards	1998
Low-Emission Vehicle Program (LEV II) Exhaust Standards	1998
Large Off-Road Gas/LPG Engine Emission Standards	1998
Cleaner Burning Gasoline Rule Improvements	1998
On-Road Heavy-Duty Truck Exhaust Emission Standards	1998
Light-Duty Vehicle Off-Cycle Emission Controls	1997
Consumer Product Emission Limits	1997
Locomotive Memorandum of Agreement for the South Coast	1997
Medium- and Heavy-Duty Gas Truck Emission Standards	1995
Aerosol Coatings Regulation	1995
Large Off-Road Diesel Statement of Principles	1996
Medium- and Heavy-Duty Gasoline Trucks	1995
Off-Road Recreational Vehicles Regulation	1994

The charts below clearly illustrate the benefits of adopted SIP measures to reduce emissions from mobile sources. The downward emission trends are dramatic given California's projected growth in population, vehicle travel, and goods movement activities. But because on-road and off-road mobile sources together account for so much of the State's inventory of ozone and PM2.5 forming emissions, further reductions in mobile source emissions are essential if air quality standards are to be realized.



Cleaning Up the Legacy Fleet

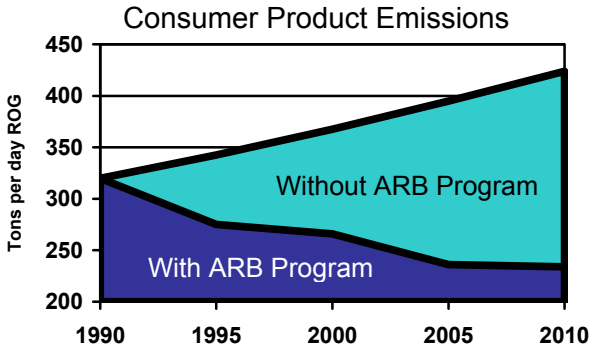
Adopted SIP measures have made significant strides in reducing emissions from those mobile sources already in use – the legacy fleet -- by keeping existing vehicles cleaner longer, getting cleaner technology on older vehicles and equipment, and replacing older dirtier vehicles and equipment with cleaner ones. Whereas new engine emissions have been regulated for a long time, most of the in-use control programs have just begun to evolve and have an impact. We still have a lot of work to do to clean up the legacy fleet. That is why the majority of new measures in the State Strategy are in-use measures.

Many programs and rules are currently in place to reduce emissions from the mobile source legacy fleets. The Smog Check Program ensures that passenger vehicles stay clean as they age and on-board diagnostic systems identify smog control problems. Heavy-duty truck inspection programs help control smoke emissions and detect emission control malmaintenance and tampering.

ARB has adopted 20 in-use regulations in the last five years. In-use regulations have required use of cleaner fuels, greatly reducing emissions from ships and harbor craft. Excessive truck and bus idling has been restricted. ARB has adopted public and private fleet rules that require local governments and private companies to incorporate the cleanest vehicles and equipment into their fleets. In-use testing procedures and verification requirements for in-use emission control technology have been strengthened. And other operational and emission control technology requirements that help reduce emissions from existing vehicle and equipment have been put into place.

Incentive programs have worked hand-in-hand with in-use regulations, providing added emissions benefits. California is currently investing up to $140 million per year to clean up older, higher-emitting sources through the Carl Moyer Program. The Smog Check Breathe Easier Campaign pays motorists $1,000 to permanently retire their high-polluting vehicles. And local governments use special vehicle registration fees to fund projects that further reduce emissions from motor vehicles.

Consumer Products



ARB has adopted standards to limit emissions from nearly 50 consumer product categories (such as hair sprays, deodorants, and cleaning compounds), as well as over 35 architectural coatings and aerosol paints categories. The Board has adopted and implemented voluntary provisions to offer greater compliance flexibility to consumer product manufacturers while retaining the air quality benefits. Without these actions, ROG emissions from these products would be roughly 60 percent greater in 2010. But, as you can see from the above chart, the impact of population growth begins to counter the benefits of adopted measures – more controls are needed.

Local Rules and Programs

Stationary and Area Sources

Local air districts are primarily responsible for controlling emissions from stationary and areawide sources, with the exception of consumer products, through regulations and permits. Stationary sources include industrial sources like factories and power plants, commercial sources like gas stations and dry cleaners, and residential sources such as fireplaces and water heaters. Areawide sources are diffuse sources of emissions that are spread over a wide area, such as paints and pesticides.

Local air districts help reduce emissions through limits on emissions from new sources (the New Source Review program) and technology-based requirements for existing sources, called Best Available Retrofit Control Technology and Reasonably Available Control Technology requirements. Air districts adopt and enforce rules governing these sources of emissions.

Businesses in California are subject to the most stringent air quality rules in the country. Local air districts have adopted a number of innovative rules and programs over the years to help reduce emissions. For example, South Coast's innovative program, RECLAIM, provides market incentives for companies to use the cleanest possible technologies. And the San Joaquin Valley has adopted a

first-of-its-kind indirect source rule that ensures that new developments bear their fair share of the pollution burden. ARB has suggested over 50 control strategies for stationary sources that many local air districts have adopted.

The proposed local air district measures for each nonattainment area are listed, described, and quantified in the attainment plans for each area. The local measures, coupled with the State Strategy measures, must provide the necessary emission reductions to meet the federal standards.

Transportation and Land Use Planning

In California, local governments are responsible for transportation and land use planning, and transportation plans are an important part of the SIP. Federal law requires a metropolitan region's transportation plan to be complementary to and conform with the region's air quality plan. Transportation and land use strategies can help to reduce the rate of growth in vehicle travel and traffic congestion, which helps reduce the growth in vehicle emissions. All the major metropolitan regions in California have approved plans emphasizing land use strategies that complement their transit and transportation systems and bring more people closer to more destinations. These strategies will help curb emissions by reducing trip distances and increasing use of public transit, carpooling, walking, and biking.

ARB's Proposed New SIP Measures

If emission reductions from the adopted measures are not enough to attain the federal standards, sufficient emission reductions from new strategies must be achieved in order to meet the emission reduction target.

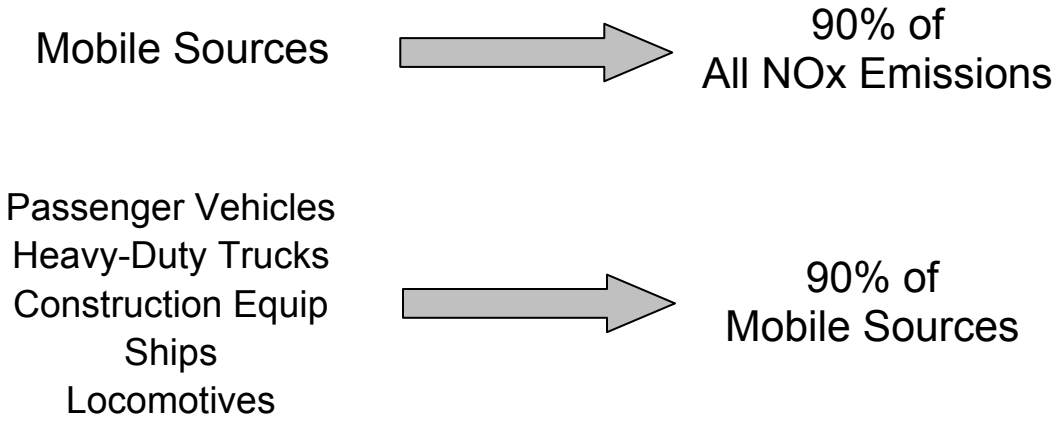
ARB staff is proposing a comprehensive and far reaching set of new measures to achieve emission reductions needed to address California's most challenging ozone and PM2.5 problems. These measures are designed to make maximum progress toward the federal 8-hour ozone standard in the South Coast and the San Joaquin Valley. The measures include aggressive near-term NOx and SOx emission reduction goals, reflecting the nature and scope of the PM2.5 problem in these regions. To achieve the emission reductions needed for both ozone and PM2.5, the State Strategy proposes new near-term actions that can be completed by 2010 or soon thereafter.

Focus of Proposed New Measures

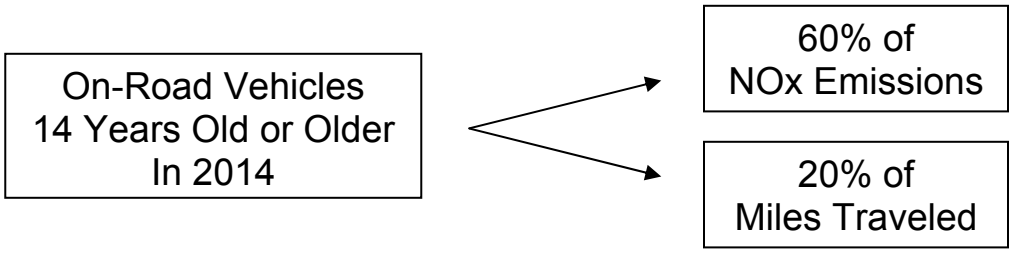
Mobile sources are the largest contributor to PM2.5 and ozone-forming emissions. Air quality science indicates that reductions of NOx are more beneficial than reductions of other pollutant precursors to help reduce levels of both ozone and PM2.5. The simple conclusion is that mobile source NOx reductions must be a main objective of the State Strategy. And since the State and federal government have almost exclusive authority over mobile source

emissions, they also have the bulk of the responsibility for implementing the State Strategy.

Mobile sources currently produce about 90 percent of all NOx emissions in the South Coast. About 90 percent of mobile source NOx emissions are produced by five major sources – passenger vehicles, heavy-duty diesel trucks, large off-road equipment, and two goods movement-related sources -- ships, and locomotives. Reducing NOx emissions from these five major sources is therefore the key to meeting the objective of the State Strategy.



More than any other pollution control effort, ARB's mobile source program has moved the State's nonattainment areas closer to meeting federal air quality standards. The majority of emission reductions from adopted SIP measures comes from emission standards for new on-road and off-road mobile sources and fuels. But as new engines have become cleaner and cleaner, the emissions contribution from older vehicles has been growing to the extent that it will soon make up the majority of mobile source emissions. For example, all on-road vehicles 14 years old or older will produce almost 60 percent of total on-road NOx emissions by 2014 but just 20 percent of total miles traveled. That is why



the majority of proposed new measures in the State Strategy are in-use measures – programs to help clean up the legacy fleet of older, dirtier vehicles and equipment. We simply cannot wait for the natural turnover of older vehicles (1-5 percent annual turnover depending on vehicle or equipment type) being replaced with newer ones.

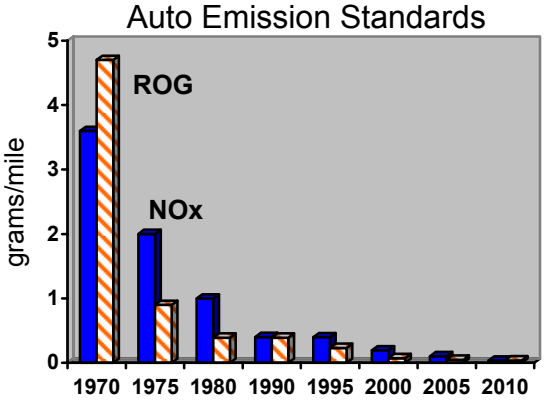
While action on the proposed in-use measures will be completed by 2010, their implementation will extend past 2010 and through 2014 to 2020. Longer-term actions will center on the final increment needed to attain the standard in the areas with the worst ozone pollution.

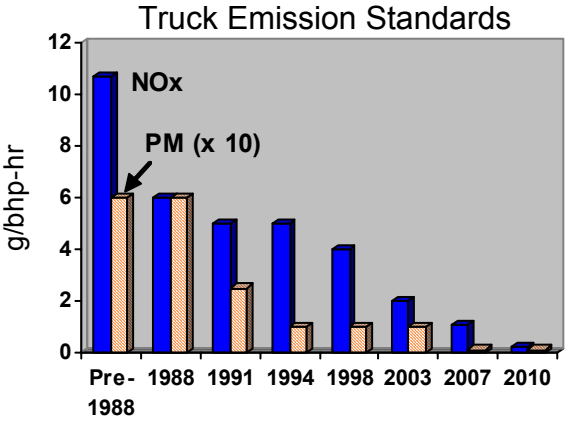
Passenger Vehicles and Heavy-Duty Trucks

Despite statewide growth in vehicle travel of 35 percent over the last 15 years, total car and truck emissions (ROG+NOx) have decreased almost 50 percent.

California has led the way in adopting stringent regulations for passenger vehicles. Compared to uncontrolled vehicles, cars are now 99 percent cleaner. A new 1965 car produced about 2,000 pounds of ozone-forming ROG emissions during 100,000 miles of driving. California's low-emission standards, coupled with reformulated gasoline, have cut that to less than 50 pounds for the average new car today. By 2010, California's standards will further reduce ROG emissions from the average new 2010 car to approximately 10 pounds.

ARB's first diesel engine regulations went into effect in 1988. Significant gains began with the introduction of California Clean Diesel fuel in 1993. U.S. EPA and ARB worked together to develop and adopt the next phases of on-road diesel engine control, with cleaner fuel in 2006 and even cleaner engines in 2007 that will reduce per-truck particulate matter emissions by another 90 percent. By 2010, new trucks will be 98 percent cleaner than new pre-1988 models, providing needed NOx reductions.





As new cars and trucks become cleaner, the emissions contribution from older vehicles has been growing to the extent that it will soon make up the majority of mobile source emissions. Thus, California's emission control program has also had to focus on cleaning up those vehicles already in use – the "legacy" or "in-use" fleet.

California's Smog Check Program is the cornerstone of the passenger vehicle in-use strategy, currently keeping over 400 tons of smog-forming gases from entering the air statewide each day. Passenger vehicles are also required to

have software incorporated into their on-board computers to detect emission control system malfunctions as they occur. ARB's heavy-duty vehicle inspection program and periodic smoke inspection program reduce emissions from the legacy truck fleet. Trucks will also be required to have the same emission control malfunction detection software as passenger vehicles beginning in 2013.

Cars and heavy-duty diesel trucks currently produce about 50 percent of the total NOx emissions in both the South Coast and San Joaquin Valley. By 2023, that percentage will be cut almost in half. But cars and trucks still account for so much of the State's inventory of ozone and PM2.5 emissions, further reductions are essential if air quality standards are to be realized.

Proposed New Passenger Vehicle and Heavy-Duty Truck Measures

Passenger Vehicles

Since California's passenger vehicle emissions standards have done their job to cut emissions to near-zero levels, the control focus must shift to keeping vehicles clean over their lifetimes. The State Strategy envisions an even stronger Smog Check program that would reduce an additional 40 tons per day of emissions statewide in 2014. Proposed new Smog Check measures include annual inspections for cars with high failure rates, such as vehicles over 15 years old and vehicles accumulating high annual miles of travel, and adding inspections of motorcycles and smaller diesel vehicles. More attention will be paid to evaporative emissions through the addition of a low-pressure evaporative test, even as exhaust emission cutpoints are tightened.

The State Strategy proposes to increase the number of vehicles that are voluntarily retired by implementing a scrappage program for vehicles that are off cycle from their Smog Check inspections. This strategy will depend upon funding and would be targeted primarily in the South Coast and San Joaquin Valley. We will also continue to ensure that the fuels used in California are the cleanest-burning available, and mitigate the additional evaporative emissions resulting from the addition of ethanol to gasoline.

These proposed passenger vehicle measures would reduce total NOx and ROG emissions in the South Coast by about 32 tons per day in 2014 and over 22 tons in 2020. Likewise, this measure will reduce total NOx and ROG emissions in the San Joaquin Valley by over 10 tons in 2014 and about 7 tons in 2020.

Heavy-Duty Diesel Trucks

Substantially reducing emissions from existing trucks is key to meeting federal air quality standards, as well as achieving diesel risk reduction and goods movement clean air goals. The State Strategy foresees an expansive in-use diesel truck emission reduction program that would reduce NOx emissions by 47 tons per day in the South Coast and 61 tons per day in the San Joaquin Valley

by 2014. Direct PM2.5 emissions would also be reduced 2-3 tons per day in both the South Coast and San Joaquin Valley during the same time period.

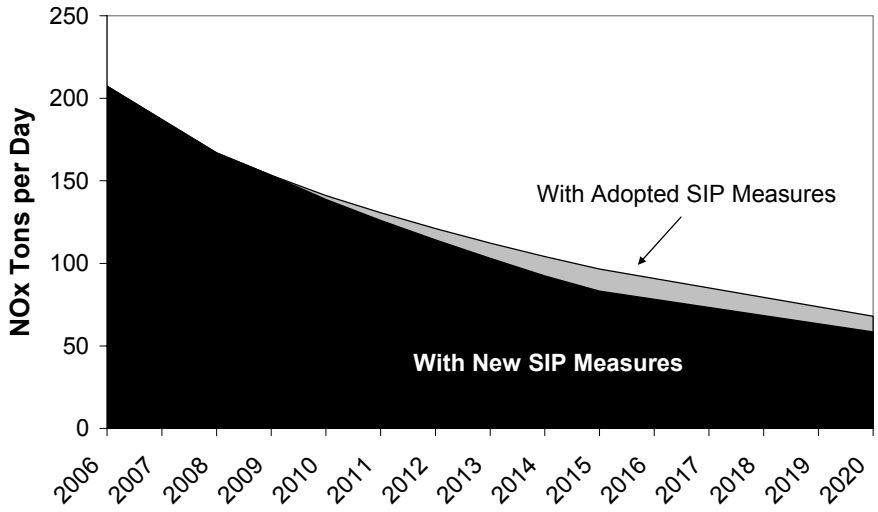
A comprehensive fleet modernization program beginning in 2010 would replace older trucks, repower trucks with cleaner engines, and retrofit trucks with devices to reduce both NOx and PM. The proposed modernization program would be equivalent to replacing approximately 30 percent of the oldest trucks by 2014 with 2010 model year or newer trucks, and will be accomplished through private truck fleet regulations. It is envisioned that the use of public incentive funds will be needed as well to facilitate fleet modernization on the scale necessary to attain PM2.5 and ozone standards within SIP deadlines.

The in-use diesel truck program also proposes to reduce emissions from trucks registered outside of California and to lessen the effects of emission control deterioration.

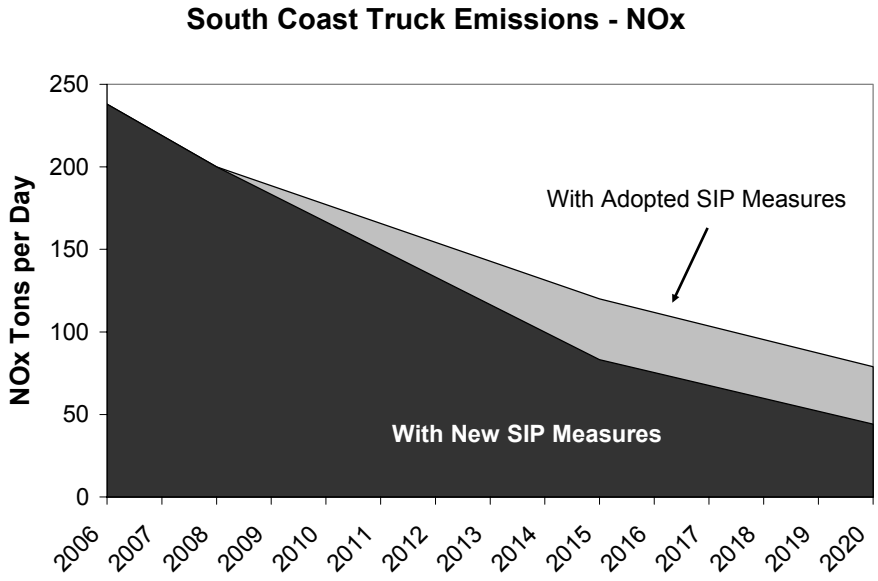
Impact of Car and Truck SIP Measures

Adopted SIP measures would reduce passenger vehicle NOx emissions in the South Coast by 67 percent between 2006 and 2020. Proposed new SIP measures would reduce that by another 15 percent by 2020.

South Coast Passenger Vehicle Emissions - NOx



Heavy-duty truck NOx emissions would be reduced by adopted SIP measures 67 percent between 2006 and 2020. Proposed new SIP measures would reduce NOx emissions by another 45 percent by 2020.



Good Movement Sources

The goods movement sector includes the ships, trains, port trucks, and related sources that help move materials and goods from the grower or manufacturer to the consumer. The air quality impact of the goods movement sector is a major issue in areas that host ports, large rail facilities, and major truck routes. Many entities have developed or are developing plans to address the impacts of goods movement, including the California Environmental Protection Agency and the Business, Transportation & Housing Agency, the Air Resources Board, the South Coast Air Quality Management District, several California ports, and two major railroads.

Two factors increase the importance of addressing emissions from goods movement sources. First, international trade through California's ports is growing rapidly: the volume of goods moving through the Port of Los Angeles and the Port of Long Beach – the nation's busiest port complex – is expected to more than double by 2020. Second, the most prominent sources in this sector have historically not been regulated as aggressively as stationary sources or other mobile sources. Goods movement sources are also powered by diesel engines that last longer than their gasoline-powered counterparts, and are often rebuilt before being replaced with newer, cleaner equipment. As a result new engine standards alone will not provide emission reductions in the timeframe allowed to attain the federal PM2.5 and ozone standards.

New measures in the State Strategy focus on the following goods movement sources: ships, locomotives, harbor craft, and port trucks. They closely mirror the measures included in Emission Reduction Plan for Ports and Goods Movement in California, approved by ARB in April 2006, and summarized briefly in Chapter 1. It is estimated that these measures will reduce 20 tons per day of

SOx, 49 tons per day of NOx, and about 4 tons per day of direct PM2.5 in the South Coast by 2014.

Ships

Emissions from ocean-going vessels, unlike most major pollution sources, are not projected to decrease in future years, since ships have little or no emission controls and run on high-emitting bunker fuel, and shipments of cargo containers are projected to grow significantly over the next two decades. Ships currently emit half the statewide SOx emissions, and it is estimated that ships will jump from the sixth to the second highest statewide NOx producer by 2023. It is essential to reduce ship emissions as they are entering our ports and when they are docked through application of demonstrated control technologies, use of cleaner fuels, and operational efficiencies. Since ARB does not have authority to set ship engine emission standards, we must work with national and international authorities, as well as the ports, to implement many of the control measures.

ARB took a big step in reducing emissions from ships in December 2005 by adopting a rule phasing in the use of cleaner low-sulfur fuel in ship auxiliary engines that will reduce SOx emissions from auxiliary engines by 96 percent and PM2.5 emissions by 83 percent beginning in 2010.

Proposed New Ship Measures

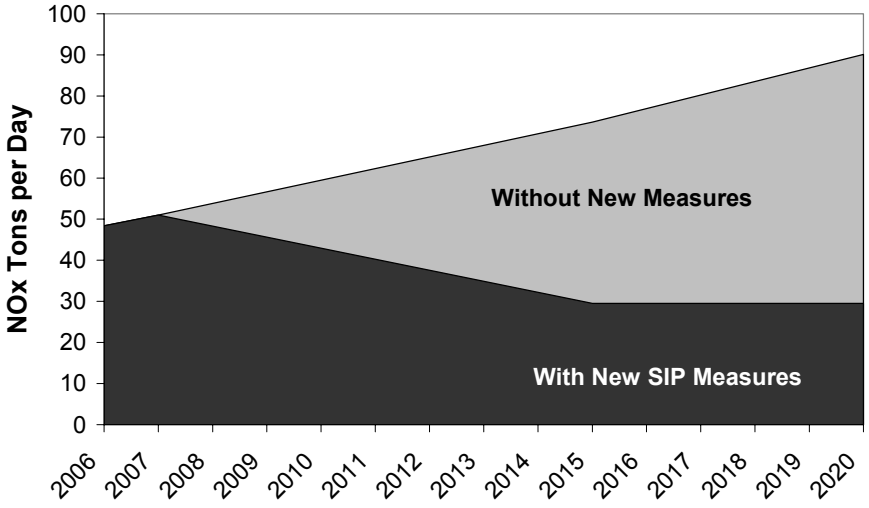
In addition to the 2005 auxiliary engine fuel rule, the State Strategy proposes to reduce emissions from ship auxiliary engines through cold ironing and other clean technology. Cold ironing allows ships to turn off their auxiliary engines and instead plug into an electrical system for power when they are docked at a port. This measure would phase in the number of ships capable of using cold ironing and other at-dock technologies such as the “hood”, which fits onto a ship’s exhaust stack and cleans the emissions, and is estimated to reduce NOx emissions about 19 tons per day in 2014 and 28 tons per day in 2020.

The State Strategy proposes to reduce emissions from ship main engines through a variety of measures. A main engine fuel rule, patterned after the auxiliary engine fuel rule, would help reduce emissions by introducing a cleaner, low-sulfur fuel beginning no later than 2010. Increasing the use of cleaner new engines or retrofitted engines beginning in 2010 could be implemented via regulation, incentives, voluntary agreements, or a combination of these approaches. Higher ship speeds cause much higher emissions. So a measure is proposed that would strengthen a current voluntary program by requiring ships to reduce their speeds to 12 knots within 40 nautical miles of the Ports of Los Angeles and Long Beach. The combination of ship main engine measures would reduce both NOx and SOx emissions by 20 tons per day and direct PM2.5 emissions by over 2 tons per day in 2014. These reductions would increase substantially through 2023.

Impact of Ship SIP Measures

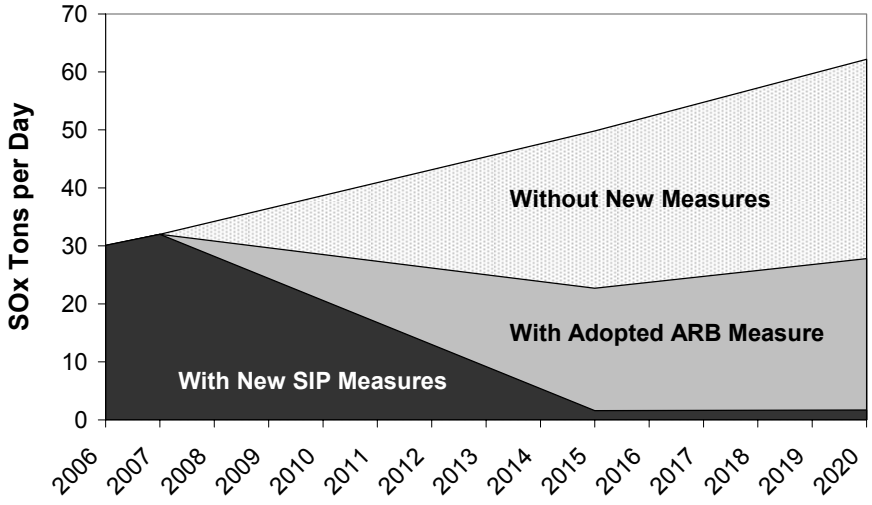
Without new SIP measures, ship NOx emissions are estimated to increase almost 90 percent between 2006 and 2020. With proposed new SIP measures, NOx emissions from ships would be 67 percent less than the projected 2020 levels and about 35 percent less than 2006 levels.

South Coast Ship Emissions - NOx



It is estimated that SOx emissions from ships will double without the adopted and new SIP measures. The adopted SIP measure (auxiliary engine fuel rule) will help reduce SOx more than 50 percent from projected 2014 levels, but emissions would then begin increasing due to goods movement growth. With proposed new SIP measures, SOx emissions would be reduced to only 2 tons per day in the South Coast by 2014 and remain at that low level through 2020.

South Coast Ship Emissions - SOx



Locomotives

Locomotives pose a difficult challenge due to their long life, interstate operations, and California's reliance on U.S. EPA to adopt new engine standards. A rule adopted by ARB in 2004 now requires locomotives operating in California to use cleaner, low-sulfur fuel that will reduce SOx emissions 90 percent. Several strategies are underway to clean up locally-based switcher engines, reduce idling emissions at railyards, and concentrate the cleanest available line haul engines in the South Coast. These activities are important for community health and NOx emission reductions in the short term. But without the introduction of cleaner new locomotive engines into California operation, growth is expected to quickly catch up to these current actions and begin to steer the NOx emissions curve upward.

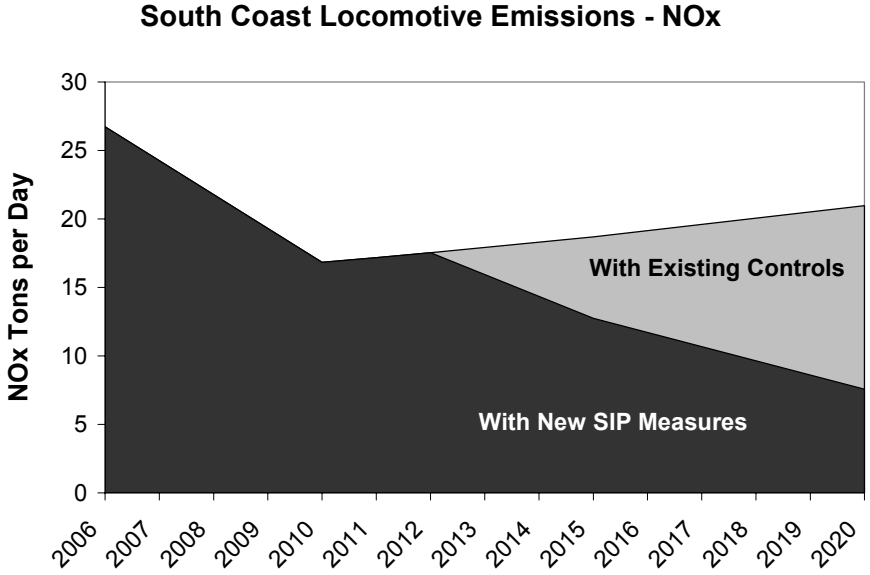
In 1998, ARB reached agreement with the rail industry to accelerate introduction of Tier 2 locomotives into the South Coast Air Basin to achieve a 67 percent reduction. However, as shown below, emissions are projected to begin increasing after 2010 due to growth. A similar agreement is needed to accelerate introduction of the next generation of cleaner locomotives once EPA adopts new standards.

Proposed New SIP Measures

The State Strategy proposes U.S. EPA adoption of more stringent new engine standards and a new industry commitment to accelerate introduction of cleaner engines in California to meet the attainment needs of the South Coast and the San Joaquin Valley. It is anticipated that the new standards will reduce NOx and PM emissions by 90 percent. The proposed measure would call for replacement of existing locomotive engines with cleaner engines and rebuilds of older engines until 100 percent of the statewide locomotive fleet has been upgraded. ARB is pushing U.S. EPA to adopt the standards with earliest possible implementation, as this measure can only occur once U.S. EPA adopts new locomotive standards.

Impact of Locomotive SIP Measures

The proposed new SIP measures would reduce NOx emissions from locomotives by 13 tons per day in the South Coast and 16 tons per day by from 2006 to 2020.



Harbor Craft

Standards adopted by U.S. EPA provide for new harbor craft engines that have roughly 50 percent less NOx emissions than uncontrolled engines. The State Strategy proposes a new measure requiring harbor craft owners to replace older engines with the newer, cleaner engines and/or add control technologies that reduce emissions, reducing NOx emissions in the South Coast about 5 tons per day by 2014.

Port trucks

Most port trucks start out as long-haul trucks and then are put into short-haul use as they get older and are no longer reliable enough for long-haul service. Because port trucks are purchased used, emission standards for new trucks will reduce emissions from trucks servicing the ports later than they will impact the long-haul fleet. The State Strategy proposes a port truck modernization program that would phase in beginning in 2008 and would include replacing older trucks with newer, cleaner trucks and retrofitting engines with emission-reducing control technology, reducing South Coast NOx emissions 2 tons per day by 2014 and 8 tons per day by 2020.

Large Off-Road Equipment

Emission standards for new off-road diesel engines have become increasingly more stringent over the past decade, ensuring that new construction, mining, industrial and oil drilling equipment become progressively cleaner. By 2015, new large off-road equipment will produce 98 percent less ROG+NOx than their uncontrolled counterparts. However, large diesel off-road equipment with more than 25 horsepower remain in use for long periods of time, sometimes up to 60 years. This long life means that new, lower emitting engines are introduced into fleets relatively slowly with the result that the emission reductions and associated health benefits from these cleaner engines will also be fairly slow to materialize.

Proposed New Large Off-Road Equipment Measure

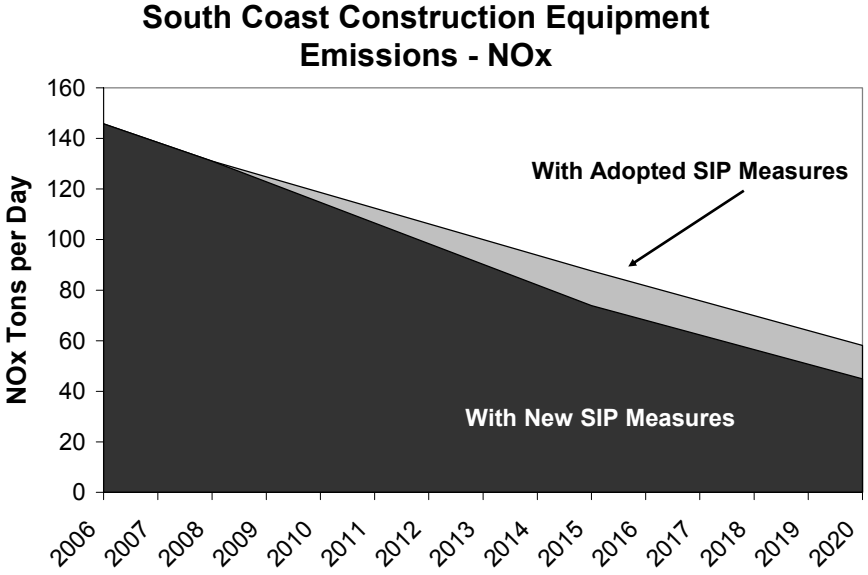
ARB staff is currently in the process of developing a statewide in-use off-road equipment regulation which could require initial NOx and PM emissions averages to be met, with increasingly lower emissions averages over time. Staff began work on the rule in 2004 as part of the Diesel Risk Reduction Program. During early SIP development work in 2006, staff identified the necessity for large NOx emission reductions from off-road equipment and other diesel sources to meet the health-based federal air quality standards. Consequently, staff revised the control concept extensively to meet California's clean air needs relative to diesel particulates, ozone, and PM2.5.

This proposed measure would require owners of equipment larger than 25 horsepower to meet a stringent average emissions level across all of their equipment. The fleet average approach provides equipment owners flexibility in how they will comply, including: swapping older, dirtier engines with newer, cleaner engines; purchasing newer equipment (with cleaner engines); and, adding emission control devices to older engines. Equipment owners could also restrict unnecessary equipment idling.

This measure would reduce 10.5 tons per day of NOx and about 3 tons per day of direct PM2.5 in the South Coast and nearly 4 tons per day of NOx and a ton per day of direct PM2.5 in the San Joaquin Valley by 2014. It would also cut direct PM2.5 emissions by more than half in 2014 and by 70 percent in 2023.

Impact of Large Off-Road Equipment SIP Measures

Adopted SIP measures would reduce large off-road equipment NOx emissions in the South Coast by almost 60 percent between 2006 and 2020. Proposed new SIP measures would reduce that by another 30 percent by 2020.



Agricultural Equipment

The State Strategy will assess an equipment modernization program once modeling for the San Joaquin Valley's PM2.5 SIP shows to what extent accelerated fleet modernization may be needed.

Other Off-Road Sources

For many gasoline-fueled off-road sources, evaporative emissions are a significant portion of total emissions. Leaky hoses, tanks, and other parts of an engine's fuel system and refueling infrastructure release hundreds of tons of ROG into the atmosphere a day. Success with low- to no-evaporative emission technology in on-road sources supports strategies to reduce evaporative emissions to similar low levels in off-road sources. Many newly-regulated sources have exhaust standards but do not yet have evaporative standards. The State Strategy proposes to set standards where there are none and make standards more stringent in sources that are not adequately controlled.

Off-road sources used mainly for recreational purposes are large emission contributors, especially during the summer ozone season. The main focus of the State Strategy on this wide array of smaller off-road sources is evaporative emissions. Recreational marine boat engines and off-road recreational vehicles are the biggest targets, with standards being implemented by 2010 and ROG emission reductions growing through 2023 as these newer, cleaner engines become a bigger part of the overall recreational fleet. Refueling tanks, portable

fuel tanks, and gas station fueling hoses, where emissions are the result of evaporation or permeation of ROG from gasoline, are also targeted. The proposed measures covering these off-road sources would reduce a combined 7 tons per day of ROG in the South Coast and about 4 tons per day in the San Joaquin Valley by 2014.

Areawide Sources

Consumer Products

Chemically formulated consumer products such as automotive care products, household care products, and personal care products have been regulated as a source of ROG emissions in five rulemakings since 1989. As a result of these measures, statewide emissions from consumer products will be reduced by over 170 tons per day in 2010, a 40 percent reduction. Despite this progress, population growth in the years ahead is expected to reverse the downward trend of emissions from consumer products, after the latest standards become effective. Therefore, additional controls for this sector will remain important. Indeed, consumer products are expected to become the largest source of ROG emissions in the South Coast, and the third largest source in the San Joaquin Valley by 2020.

The State Strategy will continue ARB's commitment to reduce ROG emissions from consumer products. Rulemakings are expected to be promulgated between 2007 and 2012, expanding beyond the current category-by-category standards and pursuing innovative approaches, reducing ROG emissions about 13 tons in the South Coast and almost 4 tons per day in the San Joaquin Valley by 2020.

Pesticides

Pesticide emissions from agricultural and commercial uses fall under the Department of Pesticide Regulation's (DPR) authority. A measure to reduce pesticide emissions was included in the SIP adopted in 1994. The State Strategy includes an updated version of that measure. It is a strategy to reduce ROG emissions from pesticides through regulations that may include limitations on the use of products formulated as fumigants, registration standards requiring liquid products that contribute less to ozone formation, and incentives promoting pest management practices that use less pesticide.

Local Measures

The proposed new local air district measures, coupled with the new State Strategy measures, must provide the necessary emission reductions to meet the federal standards. The new local measures for each nonattainment area are listed, described, and quantified in the attainment plans for each area.

Need for Technology Development and Long-term Measures

In developing the proposed State Strategy, ARB staff analyzed whether current NOx technologies for mobile sources are clean enough to provide all the emission reductions needed for ozone attainment in the South Coast and San Joaquin Valley. ARB included in this analysis the phasing in of the cleanest new technology standards from 2007-2017 that ARB and U.S. EPA have already adopted for diesel engines: 0.2 g/bhp-hr on-road truck standards in 2010, full off-road Tier 4 standards in 2014, and the recent U.S. EPA-proposed low-NOx standards for locomotive engines starting in 2017. The table below summarizes this analysis. For both areas, the totals of remaining emissions after full clean-up of the legacy diesel fleets are still greater than the NOx carrying capacities.

The clear conclusion is that even cleaner emission standards are needed than are in place today. This demonstrates that it necessary for the South Coast and San Joaquin Valley SIPs to rely on cleaner – yet to be developed – technologies as allowed by federal Clean Air Act section 182(e)(5) for areas with the worst pollution.

All New Fleets Analysis -- Unconstrained by Cost

Source	Remaining NOx 2020 Emissions (tpd) *	
	South Coast	San Joaquin Valley
Passenger vehicles	*18*	*5*
Diesel trucks	*37*	*43*
Construction and other equipment	*14*	*5*
Farm equipment	*1*	*7*
Locomotive	*7*	*5*
Ships and harbor craft	37	1
Aircraft	27	5
Stationary/area-wide sources	55	103
Subtotal of remaining emissions from above categories	195	173
All other NOx sources	52	22
Total of all remaining emissions	247	195
Carrying capacity	114	160

* Numbers may not add exactly due to rounding

For this analysis, ARB staff assumed that in 2020 all passenger cars would be 10 years old or younger, all diesel trucks would meet the 2010 NOx standards, all diesel construction and farm equipment would meet the most stringent tier 4 standards, all locomotives would meet U.S. EPA's proposed 2017 NOx standards, and the new stationary sources measure in the district SIPs would be fully implemented.

The top five rows are italicized to indicate the categories for which we assume that all vehicles and equipment meet the cleanest adopted emission standards. Included in the category "all other NOx sources" are commercial gas trucks, motorcycles, buses, motor homes, off-road recreational vehicles, and gas powered off-road equipment.

ARB staff did the analysis starting with 2020 baseline emissions since that year corresponds to the last federal attainment deadline before the 2024 extreme-classification deadline under which the long-term measure provisions of federal law apply. The numbers would look nearly identical for an analysis for any year between now and 2020 as the starting point. (For example, ARB staff calculated the "total of remaining emission" for the San Joaquin Valley using a 2018 starting point. The resulting "total of remaining emission" was approximately 195 tons per day.) The carrying capacity is independent of the year. Therefore, the analysis and conclusion that it is necessary for the South Coast and San Joaquin Valley ozone SIPs to rely on cleaner, yet to be developed, technologies is general and does not change with year analyzed.

The results for the San Joaquin Valley demonstrate that the need for cleaner technologies includes cleaner technologies for industrial sources, not just vehicles. Close to half of the San Joaquin Valley remaining emissions, 103 tons per day compared to a carrying capacity of 160 tons per day, are from stationary and area-wide sources. Clearly, long-term reductions from new technologies for both mobile and stationary sources will be needed.

Process for Identifying Long-Term Emission Reductions

ARB has a long-standing history of successfully adopting and implementing both technology-advancing regulations and innovative emission control techniques. By working closely with research scientists and the regulated industry, ARB staff have been able to craft regulations that are stringent enough to compel technology development, yet flexible enough to encourage industry innovations.

ARB staff believe a directed process is needed to ensure that future emission reduction opportunities are identified that are large enough and arrive in time to meet the attainment deadline.

To accomplish this, ARB staff proposes to take the lead in a coordinated government, private, and public effort to establish emission goals for critical emission source categories. Each category's goal will serve as a general target for how much cleaner that emission source category will need to be for attainment purposes. The setting of the source category emission goals must be science-based in two ways. First, the goals must be tied to the State's overall emission reduction needs. Although, estimated emission reduction needs will change as modeling and emission inventories are updated, a working estimate of how far technology needs to be pushed is critical to a successful outcome. Second, the goals must reflect a reasonable assessment of how far technology can progress over the time available for attainment.

This process of goal setting will give direction and distance to ARB and air district regulatory efforts to set the next generation of emission standards. As ARB and air districts identify future feasible emission reduction measures toward the goals, those measures will be incorporated into future SIPs. However, to keep near-term focus on the need to find more emission reductions, ARB staff proposes to periodically brief the Board on emerging emission reduction opportunities and promising technologies.

Potential Long-Term Concepts

Although the identification of long-term emission reductions will begin with the emission goal setting for critical emission source categories, specific approaches that ARB will evaluate for possible inclusion in the next SIP update include the following:

Passenger vehicles: look for further reductions from reduced deterioration of emission reduction components. While new cars are very clean, it may be possible to improve the on-board diagnostic capability of passenger vehicles and heavy-duty trucks to better target sources of emissions and to improve and encourage higher rates of repair.

Tighten emission standards wherever possible: review all categories of engines and vehicles to ensure that the cleanest cost-effective technologies are in place. For example:

- Exhaust and evaporative standards for on-road motorcycles.
- Second generation catalyst-based emission standards for inboard/stern drive marine engines.
- Tighter exhaust emission limits for small off-road engines.

Cleaner ground support equipment: push for increased electrification. Captured vehicle and equipment fleets used at airports are cleaner today through natural turnover and accelerated turnover spurred through cooperative State and local government and air company efforts. However, additional opportunities for increased electrification remain.

Air quality priority for federal transportation funding: work with local governments to prioritize federal transportation funding uses to better support air quality goals. The federal Congestion and Air Quality Improvement (CMAQ) Program annually provides to county transportation agencies more than $200 million in the South Coast and about $50 million in the San Joaquin Valley through 2009. The purpose of the CMAQ Program, according to Federal Highway Administration 2006 guidance, is to fund transportation projects that will contribute to attainment of national ambient air quality standards.

Ideas Requiring Further Exploration

Air quality control is an ever emerging field. At ARB, new ways to control air pollutants and improve public health are continually developed through research and other staff work. At any one time, there are always emission reduction ideas on the horizon that we have not fully explored or developed. Some of these approaches that are in various stages of development could turn out to be effective strategies at some point in the future.

The following approaches show promise as potential emission reduction strategies. However, because of technological constraints and uncertain authority, they are less defined and will require significant exploration prior to becoming concepts.

Explore opportunities for cleaner fuels. The near-term focus for fuels-related efforts in California will be to develop low carbon fuels in response to the Governor's 2007 Executive Order. Separate from that effort, ARB will continue to evaluate the opportunities for cost-effective reformulations to reduce criteria pollutant emissions.

Pursue additional emission reductions from consumer products. Despite the actions to date and the new measures proposed in this plan, consumer products continue to be an ever larger percentage of ROG emissions because of population growth. ARB will continue to look for even cleaner consumer product technologies and innovative approaches to reduce emissions such as reactivity-based and market-based strategies. This would continue the search for new approaches to achieve emission reductions initiated within the near-term consumer product measure.

Explore approaches to further reduce volatile emissions from pesticides. With the Department of Pesticide Regulation as the lead, work with interested stakeholders to determine how pesticide emissions could be further reduced.

Continue and enhance current public education and outreach programs. Public and private energy conservation and efficiency programs would continue and expand. The establishment of a statewide public education campaign to reduce air pollution could be considered, and might include ideas to engage the public through: (1) public education that more clearly connects voluntary clean air actions with public health benefits, and (2) increasing awareness of available low-emitting consumer products, paints, vehicles, lawn equipment, and recreational vehicles licensed to use clean air "green" labels.

Advocate for efficient regional land use and transportation strategies. In California, local governments have the authority over most transportation funding and land use decisions. The most effective way for regions to curb long-term growth of vehicle travel and lessen auto emissions is to build on and enhance current efforts to implement transportation and land use strategies proven to reduce vehicle trips and decrease average trip lengths.

State Implementation Plan Commitments

This section sets forth the State's SIP commitments for the 2007 State Strategy for two of the areas that need the emission benefits from the proposed, new State measures to demonstrate attainment – South Coast and San Joaquin Valley. Specific commitments for emission reductions as needed for attainment in other nonattainment areas, such as the Antelope Valley and Western Mojave Desert, Sacramento, and Ventura County, will be developed later and brought for Board consideration with SIPs for these regions.

The State's SIP commitments consist of three components:

1. Commitment to achieve emission reductions by specific dates;
2. Commitment to propose defined new SIP measures; and
3. A long-term strategy commitment.

The total emission reductions and the obligation to propose specific measures for Board consideration would become enforceable upon approval by U.S. EPA of the State Strategy and each district's attainment plan. The commitments for emission reductions are calculated using the planning inventory described in Appendix A; progress will be tracked in the same inventory currency to assess compliance.

The total emission reductions from the new measures necessary to attain the federal standards are an enforceable State commitment in the SIP. While the proposed State Strategy includes estimates of the emission reductions from each of the individual new measures, it is important to note that the commitment of the State Strategy is to achieve the total emission reductions necessary to attain the federal standards, which would be the aggregate of all existing and proposed new measures combined. Therefore, if a particular measure does not get its expected emission reductions, the State still commits to achieving the total aggregate emission reductions, whether this is realized through additional reductions from the new measures, or from alternative control measures or incentive programs.

For informational purposes, the tables below show the expected emission reductions from the proposed new SIP measures in the South Coast and San Joaquin Valley in 2014, 2020, and 2023. The first table shows the expected NOx and ROG emission reductions for South Coast and San Joaquin Valley for 2023, the year in which the emission reduction target must be met for the expected ozone attainment date of 2024 for these areas. The second table shows the expected NOx and ROG emission reductions for the two areas for 2020 to help illustrate the progress that will be made prior to the proposed 2024 attainment deadlines for the South Coast and San Joaquin Valley. The third and fourth tables show the expected emissions reductions from NOx, ROG, SOx, and direct PM2.5 in the South Coast and San Joaquin Valley in 2014, the year in which emission reduction targets must be met for the federal PM2.5 standard.

Expected Emission Reductions from Proposed New SIP Measures
(tons per day)

South Coast and San Joaquin Valley -- 2023

	South Coast		San Joaquin Valley	
Proposed New SIP Measures	**NOx**	**ROG**	**NOx**	**ROG**
Passenger Vehicles	**7.1**	**10.5**	**2.1**	**3.3**
Smog Check Improvements (BAR)	6.9	7.5	2.1	1.9
Expanded Vehicle Retirement	0.2	0.5	0.04	0.1
Modifications to Reformulated Gasoline Program	--	2.5	--	1.3
Heavy-Duty Trucks	**18.3**	**1.7**	**21.2**	**2.3**
Cleaner In-Use Heavy-Duty Trucks	18.3	1.7	21.2	2.3
Goods Movement Sources	**99.2**	**1.9**	**16.4**	**1.3**
Ship Auxiliary Engine Cold Ironing & Clean Technology	30.8	--	--	--
Cleaner Main Ship Engines and Fuel	39.9	--	--	--
Port Truck Modernization	7.0	--	--	--
Accelerated Intro. of Cleaner Line-Haul Locomotives	15.6	1.9	16.4	1.3
Clean Up Existing Harbor Craft	5.9	NYQ	--	NYQ
Off-Road Equipment	**13.9**	**1.9**	**5.4**	**0.6**
Cleaner In-Use Off-Road Equipment (over 25hp)	13.9	1.9	5.4	0.6
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ	NYQ
Other Off-Road Sources	**2.4**	**24.0**	**0.6**	**11.4**
New Emission Standards for Recreational Boats	2.4	17.6	0.6	5.3
Expanded Off-Road Rec. Vehicle Emission Standards	--	6.4	--	6.1
Additional Evaporative Emission Standards	--	NYQ	--	NYQ
Vapor Recovery for Above Ground Storage Tanks	--	NYQ	--	NYQ
Areawide Sources	**--**	**13.7**	**--**	**6.3**
Consumer Products Program	--	13.7	--	3.8
Pesticides: DPR Regulation	--	NYQ	--	2.5
Emission Reductions from Proposed New Measures	**141**	**54**	**46**	**25**

NYQ = Not Yet Quantified. BAR = Bureau of Automotive Repair. DPR = Dept. of Pesticide Regulation.

Locomotives measure relies on U.S. EPA rulemaking and industry agreement to accelerate fleet turnover.
Note: Emission reductions reflect the combined impact of regulations and supportive incentive programs. Emission reduction estimates for each proposed measure are shown for informational purposes only. Actual emission reductions from any particular measure may be greater than or less than the amounts shown.

Expected Emission Reductions from Proposed New SIP Measures
(tons per day)

South Coast and San Joaquin Valley -- 2020

	South Coast		San Joaquin Valley	
Proposed New SIP Measures	**NOx**	**ROG**	**NOx**	**ROG**
Passenger Vehicles	**9.6**	**12.9**	**2.7**	**4.1**
Smog Check Improvements (BAR)	8.3	8.7	2.4	2.2
Expanded Vehicle Retirement	1.3	1.2	0.3	0.3
Modifications to Reformulated Gasoline Program	--	3.0	--	1.6
Heavy-Duty Trucks	**26.9**	**2.6**	**30.2**	**3.3**
Cleaner In-Use Heavy-Duty Trucks	26.9	2.6	30.2	3.3
Goods Movement Sources	**87.1**	**1.8**	**15.6**	**1.2**
Ship Auxiliary Engine Cold Ironing & Clean Technology	28.3	--	--	--
Cleaner Main Ship Engines and Fuel	32.3	--	--	--
Port Truck Modernization	8.0	--	--	--
Accelerated Intro. of Cleaner Line-Haul Locomotives	13.4	1.8	15.6	1.2
Clean Up Existing Harbor Craft	5.1	NYQ	--	NYQ
Off-Road Equipment	**18.7**	**2.9**	**7.0**	**1.0**
Cleaner In-Use Off-Road Equipment (over 25hp)	18.7	2.9	7.0	1.0
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ	NYQ
Other Off-Road Sources	**1.6**	**17.9**	**0.4**	**8.7**
New Emission Standards for Recreational Boats	1.6	12.8	0.4	3.8
Expanded Off-Road Rec. Vehicle Emission Standards	--	5.1	--	4.9
Additional Evaporative Emission Standards	--	NYQ	--	NYQ
Vapor Recovery for Above Ground Storage Tanks	--	NYQ	--	NYQ
Areawide Sources	**--**	**13.5**	**--**	**6.1**
Consumer Products Program	--	13.5	--	3.6
Pesticides: DPR Regulation	--	NYQ	--	2.5
Emission Reductions from Proposed New Measures	**144**	**52**	**56**	**24**

NYQ = Not Yet Quantified. BAR = Bureau of Automotive Repair. DPR = Dept. of Pesticide Regulation.

Locomotives measure relies on U.S. EPA rulemaking and industry agreement to accelerate fleet turnover.
Note: Emission reductions reflect the combined impact of regulations and supportive incentive programs. Emission reduction estimates for each proposed measure are shown for informational purposes only. Actual emission reductions from any particular measure may be greater than or less than the amounts shown.

Expected Emission Reductions from Proposed New SIP Measures
(tons per day)

South Coast -- 2014

Proposed New SIP Measures	NOx	ROG	Direct PM2.5	SOx
Passenger Vehicles	**14.4**	**17.7**	**0.3**	**--**
Smog Check Improvements (BAR)	12.0	10.5	0.2	--
Expanded Vehicle Retirement	2.4	2.8	0.05	--
Modifications to Reformulated Gasoline Program	--	4.4	--	--
Heavy-Duty Trucks	**47.3**	**5.1**	**3.0**	**--**
Cleaner In-Use Heavy-Duty Trucks	47.3	5.1	3.0	--
Goods Movement Sources	**49.4**	**0.7**	**3.6**	**20.1**
Ship Auxiliary Engine Cold Ironing & Clean Technology	18.5	--	0.3	0.4
Cleaner Main Ship Engines and Fuel	20.0	--	2.4	19.7
Port Truck Modernization	2.0	--	0.5	--
Accelerated Intro. of Cleaner Line-Haul Locomotives	4.3	0.7	0.2	--
Clean Up Existing Harbor Craft	4.6	--	0.2	--
Off-Road Equipment	**10.5**	**2.7**	**2.6**	**--**
Cleaner In-Use Off-Road Equipment (over 25hp)	10.5	2.7	2.6	--
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ	--
Other Off-Road Sources	**0.4**	**6.6**	**--**	**--**
New Emission Standards for Recreational Boats	0.4	4.2	--	--
Expanded Off-Road Rec. Vehicle Emission Standards	--	2.4	--	--
Additional Evaporative Emission Standards	--	NYQ	--	NYQ
Vapor Recovery for Above Ground Storage Tanks	--	NYQ	--	NYQ
Areawide Sources	**--**	**12.9**	**--**	**--**
Consumer Products Program	--	12.9	--	--
Pesticides: DPR Regulation	--	NYQ	--	--
Emission Reductions from Proposed New Measures	**122**	**46**	**9**	**20**

NYQ = Not Yet Quantified. BAR = Bureau of Automotive Repair. DPR = Dept. of Pesticide Regulation.

Locomotives measure relies on U.S. EPA rulemaking and industry agreement to accelerate fleet turnover.
Note: Emission reductions reflect the combined impact of regulations and supportive incentive programs. Emission reduction estimates for each proposed measure are shown for informational purposes only. Actual emission reductions from any particular measure may be greater than or less than the amounts shown.

Expected Emission Reductions from Proposed New SIP Measures
(tons per day)

San Joaquin Valley -- 2014

Proposed New SIP Measures	NOx	ROG	Direct PM2.5	SOx
Passenger Vehicles	**3.8**	**6.5**	**0.1**	**--**
Smog Check Improvements (BAR)	3.3	2.9	0.05	--
Expanded Vehicle Retirement	0.5	0.7	0.01	--
Modifications to Reformulated Gasoline Program	--	2.9	--	--
Heavy-Duty Trucks	**61.4**	**6.4**	**3.6**	**--**
Cleaner In-Use Heavy-Duty Trucks	61.4	6.4	3.6	--
Goods Movement Sources	**7.2**	**0.5**	**0.2**	**--**
Ship Auxiliary Engine Cold Ironing & Clean Technology	--	--	--	--
Cleaner Main Ship Engines and Fuel	--	--	--	--
Port Truck Modernization	--	--	--	--
Accelerated Intro. of Cleaner Line-Haul Locomotives	7.2	0.5	0.2	--
Clean Up Existing Harbor Craft	--	NYQ	--	--
Off-Road Equipment	**3.7**	**0.9**	**0.8**	**--**
Cleaner In-Use Off-Road Equipment (over 25hp)	3.7	0.9	0.8	--
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ	--
Other Off-Road Sources	**0.1**	**3.5**	**--**	**--**
New Emission Standards for Recreational Boats	0.1	1.3	--	--
Expanded Off-Road Rec. Vehicle Emission Standards	--	2.2	--	--
Additional Evaporative Emission Standards	--	NYQ	--	NYQ
Vapor Recovery for Above Ground Storage Tanks	--	NYQ	--	NYQ
Areawide Sources	**--**	**5.7**	**--**	**--**
Consumer Products Program	--	3.2	--	--
Pesticides: DPR Regulation	--	2.5	--	--
Emission Reductions from Proposed New Measures	**76**	**23**	**5**	**0**

NYQ = Not Yet Quantified. BAR = Bureau of Automotive Repair. DPR = Dept. of Pesticide Regulation.

Locomotives measure relies on U.S. EPA rulemaking and industry agreement to accelerate fleet turnover.
Note: Emission reductions reflect the combined impact of regulations and supportive incentive programs. Emission reduction estimates for each proposed measure are shown for informational purposes only. Actual emission reductions from any particular measure may be greater than or less than the amounts shown.

Commitments to Reduce Emissions

The tables below describe the emission reduction commitment proposal for Board approval. ARB staff proposes to commit to achieve the emission reductions set forth in these tables, by the dates indicated in the table on Page 65 entitled, "Schedule for Board Consideration of Proposed ARB Rulemaking." The reductions may be achieved through a combination of actions, including regulations, incentives, and other enforceable mechanisms.

Summary of Emission Reduction Commitments – South Coast

Year	NOx	ROG	Direct PM2.5	SOx
2014	122	46	9	20
2020 [1]	144	52	--	--
2023	141	54	--	--
2023 CAA 182(e)(5) measures	241 [2]	40 [2]	--	--

[1] The 2020 commitment in the South Coast is necessary to provide for attainment in the downwind nonattainment areas.

[2] The reductions of NOx and ROG from 182(e)(5) measures will be reassessed as new SIPs are developed and revised.

Summary of Emission Reduction Commitments – San Joaquin Valley

Year	NOx	ROG	Direct PM2.5	SOx
2014	76	23	5	0
2020	56	24	--	--
2023	46	25	--	--
2023 CAA 182(e)(5) measures	81 [1]	-- [1]	--	--

[1] The reductions of NOx and ROG from 182(e)(5) measures will be reassessed as new SIPs are developed and revised.

Summary of Emission Reduction Commitments – Coachella Valley

Year	NOx	ROG
2018	7	2

Commitment to Propose Defined New SIP Measures

In addition to the commitment to reduce emissions by 2014, 2020 and 2023, ARB staff also proposes to commit to submit to the Board and propose for adoption the list of proposed new ARB control measures shown in the table below. The Board shall take action on or before the dates set forth in the following table. Such action by the Board may include any action within its discretion.

Schedule for Board Consideration of Proposed ARB Rulemaking

Proposed New SIP Measures	Year
Cleaner In-Use Off-Road Equipment	2007
Modifications to Reformulated Gasoline Program	
Cleaner Main Ship Fuel	
Clean Up Existing Harbor Craft	
Enhanced Vapor Recovery for Above Ground Storage Tanks	
Cleaner In-Use Heavy-Duty Trucks	2008
Port Truck Modernization	
Ship Auxiliary Engines	
Cleaner Line-Haul Locomotives (Enforceable Agreement)	
Consumer Products Program I	
Cleaner In-Use Agricultural Equipment	2009-2010
New Emission Standards for Recreational Boats	
Expanded Off-Road Recreational Vehicle Emission Standards	
Additional Evaporative Emission Standards	
Consumer Products Program II	2010-2012

State Strategy
Proposed New SIP Measures
Implementing Agency – Expected Action – Expected Implementation

Proposed New SIP Measures	Implementing Agency	Expected Action	Expected Implementation
Passenger Vehicles			
Smog Check Improvements	BAR	2007-2008	By 2010
Expanded Vehicle Retirement	ARB/BAR	2008-2014	2008-2014
Modifications to Reformulated Gasoline Program	ARB	2007	Phase-in starting 2010
Trucks			
Cleaner In-Use Heavy-Duty Trucks	ARB	2008	2010-2015
Goods Movement Sources			
Auxiliary Ship Engine Cold Ironing and Other Clean Technology	EPA/ARB/ Local	2007-2008	Phase-in starting 2010
Cleaner Main Ship Engines and Fuel	EPA/ARB Local	Fuel: 2007 Engines: 2009	2007-2010 Phase-in starting 2010
Port Truck Modernization	ARB/Local	2007-2008	2008-2020
Accelerated Introduction of Cleaner Line-Haul Locomotives	EPA/ARB	2007-2008	Starting in 2012
Clean Up Existing Harbor Craft	ARB	2007	2009-2018
Off-Road Equipment			
Cleaner In-Use Off-Road Equipment	ARB	2007	Phase-in starting 2008
Cleaner In-Use Agricultural Equipment	ARB	2009-2010	TBD
Other Off-Road Sources			
New Emission Standards for Recreational Boats	ARB	2009-2010	2012-2013
Expanded Off-Road Recreational Vehicle Emission Standards	ARB	By 2010	2012-2015
Enhanced Vapor Recovery for Above Ground Storage Tanks	ARB	2007	Phase-in starting 2008
Additional Evaporative Emission Standards	ARB	By 2010	2010-2012
AREAWIDE SOURCES			
Consumer Products Program	ARB	2007-2008 2010-2012	By 2010 By 2012-2014
DPR Pesticide Regulation	DPR	2008	2008

DPR = Department of Pesticide Regulation. BAR = Bureau of Automotive Repair
TBD = To Be Determined

Commitment to Reduce Emissions via Long-Term Strategy

Consistent with section 182(e)(5) of the federal Clean Air Act, this SIP includes long-term commitments to achieve the last increment of emission reductions necessary to meet attainment goals in the South Coast and San Joaquin Valley. As the State agency charged with ensuring California's SIP compliance, ARB is ultimately responsible for ensuring the necessary measures are identified no later than 2020 (three years prior to the attainment year) and the emission reductions achieved by 2023.

After adoption of the State Strategy, ARB staff proposes to initiate a coordinated government, private, and public effort to establish emission goals for critical mobile and stationary emission source categories. Following the setting of emission goals, ARB will start an ongoing public process to assess technology advancement opportunities for the critical categories. ARB staff will periodically brief the Board at public meetings on emerging emission reduction opportunities, promising technologies, and the progress made in developing long-term emission reduction measures. As ARB staff identifies feasible technology-forcing emission reduction measures, staff will propose those measures to the Board for inclusion into the SIP.

No later than 2020, ARB and the two air districts will prepare a revision to the 8-hour Ozone SIP that (1) reflects any modifications to the 2023 emission reduction target based on updated science, and (2) identifies any additional strategies, including the implementing agencies, needed to achieve the necessary emissions reductions by 2023. If the specific measures developed to satisfy the long-term obligation affect on-road motor vehicle emissions, we will work with the air districts and transportation planning agencies to revise the transportation conformity budgets accordingly.

South Coast: After accounting for the anticipated benefits of both adopted and new defined State and local measures, the 2003 SIP demonstrates a need for another 281 tpd ROG and NOx reductions from long-term measures. This represents 24 percent of the total reductions needed by 2023. We believe that this gap can be bridged through a cooperative effort by the local, State and federal agencies responsible for specific emission sources. This effort should focus on how to most effectively achieve the additional reductions, considering the availability and cost of potential controls.

San Joaquin Valley: After accounting for the anticipated benefits of both adopted and new defined State and local measures, the State Strategy demonstrates a need for another 81 tpd NOx reductions from long-term measures. This represents 13 percent of the total NOx and ROG reductions needed by 2023. We believe that this gap can be bridged through a cooperative effort by the local, State and federal agencies responsible for specific emission sources. This effort should focus on how to most effectively achieve the additional reductions, considering the availability and cost of potential controls.

Role of Funding and Incentive Programs

Over the past 40 years, California has steadily improved air quality in the face of tremendous economic and population growth. The vast majority of that progress has come from effective regulations. Accordingly, ARB staff expects State and federal regulations to play the primary role in implementing the State Strategy. In the regulatory paradigm, polluting sources pay for the necessary emission controls as part of doing business. Regulated industries may pass these costs on to consumers in the form of higher prices, although competition and other factors may prevent some companies from recouping all of their control costs. Low-interest loans with extended payment periods are available to aid smaller businesses that need upfront capital to comply.

In recent years, regulatory programs have been supplemented with financial incentives to accelerate voluntary actions, such as replacing older equipment. Incentive programs like the Carl Moyer Program are both popular and effective. They also help to demonstrate emerging technologies that then can be used to set a tougher emissions benchmark for regulatory requirements. Most of the existing incentive programs are designed to pay for the incremental cost between what is required by regulation and advanced technology that exceeds that level. The incentive programs are publicly funded through fees paid by California vehicle owners as part of their annual registrations, smog inspections or new tire purchases. California is currently investing up to $140 million per year to clean up older, higher emission sources.

The support for clean air incentive funding from Governor Schwarzenegger, the Legislature, and California's voting public is reflected in the passage on November 7, 2006, of the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006. The Bond Act includes $1 billion to accelerate the cleanup of air pollution caused by goods movement activities in California. With appropriation by the Legislature, and subject to such conditions and criteria contained in a statute that it will enact, ARB will appropriate this money to fund emission reductions from activities related to the movement of freight along California's trade corridors.

Federal Actions Needed

Measures in the State Strategy to reduce emissions from interstate and international sources rely on the federal government to develop more stringent emission standards and to ensure these standards go into effect as soon as possible. Emission reductions from locomotives, off-road equipment, marine auxiliary engines, and harbor craft are a significant part of the State Strategy. Proposed State measures would accelerate the introduction of cleaner engines and equipment, but the emission reductions rely on the availability of cleaner new engines.

ARB is proposing several measures to reduce ship emissions through a combination of regulations, incentives, and actions by ports and the private

sector. However, national and international action to clean up shipping fleets is also needed to fully realize our clean air goals. And aircraft emissions, which will become one of the South Coast's top five NOx sources by 2020, are unaddressed in the State Strategy due to the lack of effective international standards.

California must rely on U.S. EPA to represent its interests before foreign or international regulatory bodies that have the ability to reduce emissions from international goods movement sources. In this role, U.S. EPA should advocate for the adoption of cleaner ship emission standards and less polluting practices by the International Maritime Organization.

Possible Federal Actions

Adopt more stringent standards for sources under federal control. U.S. EPA should move as fast as possible to lower standards for sources under its control, keeping in mind California's air quality challenge and attainment deadlines. There are categories of emission sources that we do not have the authority to regulate at the State level. We also do not have the ability to regulate sources in markets outside of California that then operate within California. Not only would federal action lower emissions for new sources, but it would allow State and local actions to lower emissions from existing sources by setting in-use rules that speed up the integration of the cleaner engines and technology into California fleets. These sources include: ships, locomotives, harbor craft, aircraft, and off-road equipment and vehicles.

Federal incentives for cleaner technology. Federal funding sources for clean air projects, as well as federal tax incentives promoting the manufacture, sale, and purchase of cleaner vehicles, equipment, and technology, could enhance California's aggressive incentive programs.

Ozone Attainment Demonstrations

The table on the following page illustrates how the State Strategy will meet the emission reduction targets for ozone in the South Coast and San Joaquin Valley.

This document has presented ARB staff's assessment of the State Strategy for the San Joaquin Valley and the South Coast in detail. ARB staff has also evaluated the impact of the proposed State Strategy on all 15 ozone nonattainment areas. For the remaining areas, modeling results and air quality data analyses show that, with the continued reductions in emissions on track to occur in each area, all will be able to show attainment by 2021 or earlier with identified measures.

ARB staff expects the districts within the Sacramento nonattainment area will request a reclassification from serious to severe and will need additional reductions from ARB's proposed new measures to attain by 2019. San Diego is projected to attain by its deadline, while Ventura may consider a reclassification to either Serious or Severe. Transport impacted areas, especially downwind of the South Coast—the Antelope Valley, the Mojave Desert, and the Coachella Valley—will need to rely on new reductions that will occur upwind. We expect the local districts to request reclassification to get the needed time. Areas downwind of the Central Valley—Western Nevada, Amador, Calaveras, Tuolumne, Mariposa, and Kern Counties—are projected to attain by their 2014 deadline with already adopted measures. Air quality modeling for these areas is new and ARB staff is continuing to evaluate the results. Finally, three areas—the Bay Area, Butte County, and the Sutter Buttes—now attain the ozone standard.

Attainment demonstrations for these areas will be included in the individual ARB staff reports for each area.

Setting the Ozone Emission Reduction Target (tons per day)

	Nonattainment Area			
	South Coast (2023)		San Joaquin Valley (2023)	
	NOx	ROG	NOx	ROG
2006 Emissions Inventory	972	732	650	454
Carrying Capacity	114	420	160	342
Emission Reduction Target	858	312	490	112

(2006 Emissions Inventory) – (Carrying Capacity) = (Emission Reduction Target)

2006 Emissions Inventory = Amount of ozone-forming emissions.
Carrying Capacity = Pollutant emissions limit that ensures air quality standards are met.
Emission Reduction Target = Amount of emissions that must be reduced to meet the standard.

Meeting the Ozone Emission Reduction Target (tons per day)

	Nonattainment Area			
	South Coast (2023)		San Joaquin Valley (2023)	
	NOx	ROG	NOx	ROG
Emission Reduction Target	858	312	490	112
Emission Reductions from Adopted SIP Measures	467	199	355	43
Emission Reductions from New Local Measures	9	19	8	47
Emission Reductions from New State Measures	141	54	46	25
Long-Term Measures	241	40	81	--
Total Reductions	**858**	**312**	**490**	**115**

Emission Reductions from Adopted SIP Measures = Emissions reduced from measures adopted through 2006.
Emission Reductions from New Measures = Emissions reduced from measures in the State Strategy or new local measures adopted after 2006.
Long-Term Measures = Emissions reduced from measures adopted after 2020 that rely on new or evolving technology, as allowed in section 182(e)(5) of the Clean Air Act.

Tracking Progress

The Clean Air Act requires that SIPs show there will be steady progress in reducing emissions during the years leading to the attainment date, called reasonable further progress, equal to about 3 percent per year. (Each nonattainment area's reasonable further progress is illustrated in the local plans and in Appendix D.) Along with tracking progress to meet the SIP requirements, ARB will have a stringent tracking process for strategies under its jurisdiction. There will be periodic updates to ARB's governing board on the SIP's New Strategies. In addition, other ARB programs vital to the SIP have their own deadlines and tracking schedules. The goal of ARB's Diesel Risk Reduction Plan is to reduce the health risk from diesel emissions 75 percent by 2010 and 85 percent by 2020. The Emission Reduction Plan for Ports and Goods Movement in California has specific emission reduction milestones in 2010, 2015 and 2020. ARB is committed to achieving all of its goals in these plans and the SIP and will be tracking progress on each.

Contingency Measures Requirement

The federal Clean Air Act requires attainment plans to identify "contingency measures" to be implemented if nonattainment areas (except those designated "marginal") fail to meet reasonable further progress requirements or to attain the federal air quality standards on time. These contingency measures are to take effect without further ARB or air district action, and thus must be measures that have already been adopted when the SIP is submitted to U.S. EPA.

The bulk of emission reductions needed to attain the federal standards are achieved through the mobile source measures in the State Strategy's existing program. As we have noted previously, California's mobile source program has been very successful in reducing emissions in California and represents the foundation supporting attainment of the federal standards. ARB has a well established history of adopting and implementing mobile source control regulations on-time or early. As a result, we expect to achieve and even exceed reasonable further progress goals without the need for contingency measures. However, the Clean Air Act requirements necessitate that we provide contingency measures regardless of our expected progress in reducing emissions toward the attainment goals.

For areas designed basic, moderate, and serious, reasonable further progress can be demonstrated with already adopted measures and therefore contingency measures are not necessary. For areas designated severe and extreme, the emission reductions from adopted measures that go beyond the reasonable further progress requirements will constitute California's contingency measure commitment implemented in the unlikely event that the State does not meet the reasonable further progress goals.

A more detailed analysis of the contingency measure commitment is included in Appendix D.

4. PM2.5 Attainment in the South Coast

South Coast air district modeling conducted in early 2007 indicated that the adopted and new SIP measures in the Proposed State Strategy would bring South Coast PM2.5 levels down to 15.7 ug/m^3 by 2014. While this is tremendous progress, it is still 0.7 ug/m^3 above the standard. The South Coast air district also used air quality modeling to identify additional reductions the district believes are needed beyond those in the State Strategy. The South Coast air district's emission reduction targets and the additional reductions needed to meet the district's targets are shown in the table below.

South Coast Air District Proposed Attainment Demonstration

	NOx	ROG	SOx	Direct PM2.5
Emission Reductions Needed	203	59	24	14
Reductions from New Measures	129	52	23	11
Additional Reductions Needed to Meet South Coast Targets	**74**	**7**	**1**	**3**

However, the additional large NOx reductions called for by the South Coast air district is just one potential way to close the 0.7 ug/ m^3 gap. This chapter explores alternatives for attaining the federal PM2.5 standard by the 2015 deadline. It starts by characterizing the PM2.5 problem to give context to the complexities of PM2.5 sources, formation, and control. It looks at closing the gap through aggressive direct particulate matter reductions: local measures to decrease emissions from residential wood burning, restaurant cooking, and fugitive dust. It analyzes the South Coast air district staff's ideas for mobile source measures to see if it is feasible to get the additional NOx emission reductions called for by the South Coast air district. Finally, it makes recommendations for Board consideration regarding actions to meet the South Coast PM2.5 challenge.

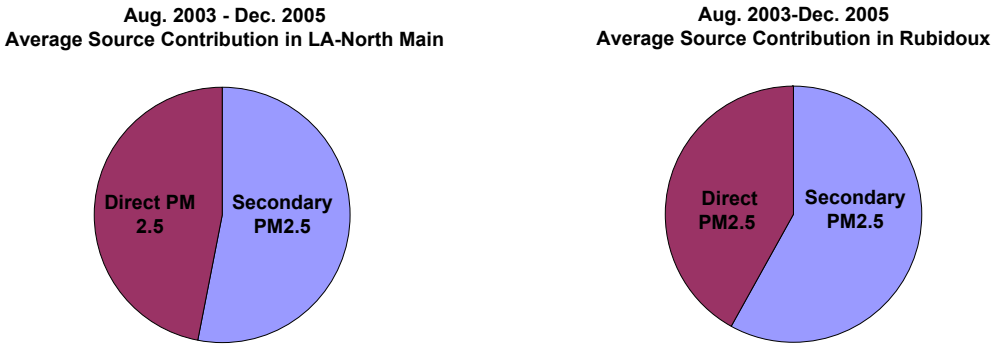
Nature of PM2.5 Pollution

Assessing how emissions affect the air we breathe is more complicated for PM2.5 than it is for ozone. While ozone has just two key precursors, PM2.5 is a complex mix of particles, some formed in the air and some emitted directly.

PM2.5 can be formed in the air from the reaction of the precursor gases – primarily NOx, SOx, ROG, and ammonia. The resulting particles are referred to as secondary PM2.5. The two main components of secondary PM2.5 in the South Coast are ammonium nitrate and ammonium sulfate, which are formed when NOx and SOx interact with ammonia. PM2.5 can also be directly emitted

into the air in forms such as smoke, dust, and soot. The main contributors of directly emitted PM2.5 are organic and elemental carbon, emitted from sources like residential wood burning, commercial cooking, gas and diesel engines, and airborne soil (dust).

Special monitoring and analytical tools are used to determine which sources contribute to PM2.5 levels in a specific area and how much. Because the PM2.5 problem can have localized as well as regional components, strategies that focus on the major contributors of PM2.5 in specific areas can be critical to meeting air quality standards.

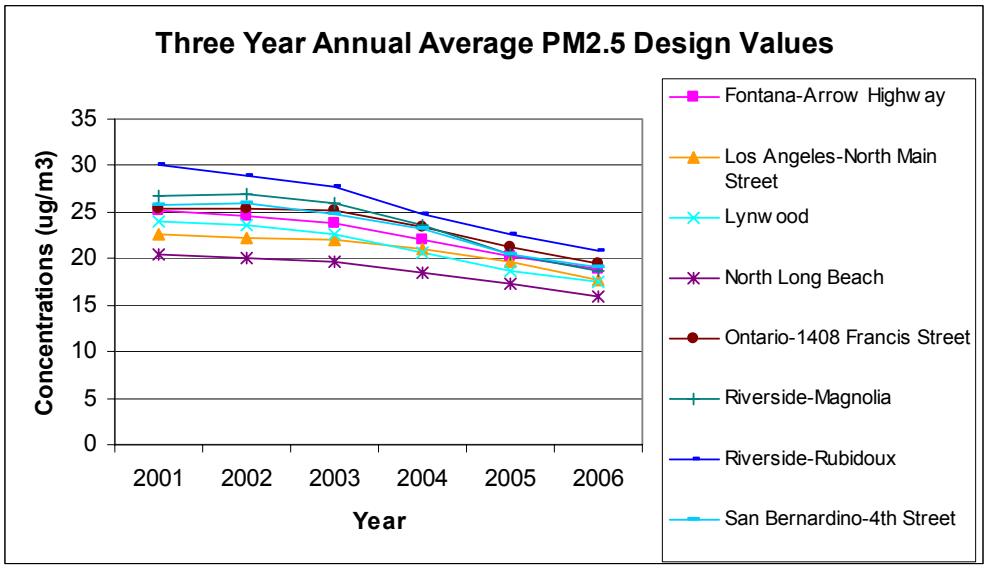


The figure above shows the results of an ARB staff source attribution analysis of data from PM2.5 captured on filters at two monitoring sites in the South Coast: the Los Angeles-North Main (LA-North Main) site, located in an industrial area 1.5 miles northeast of downtown Los Angeles, and the Riverside-Rubidoux (Rubidoux) monitoring site in western Riverside County. The analysis shows that secondary PM2.5 caused primarily by NOx and SOx emissions contributes over half of the PM2.5 pollution in both areas. This highlights the need for substantial emission reductions from mobile sources, which are the main sources of NOx and SOx. But directly emitted particles also contribute a very large portion of PM2.5 pollution. A good portion of directly emitted particles are from sources other than motor vehicles.

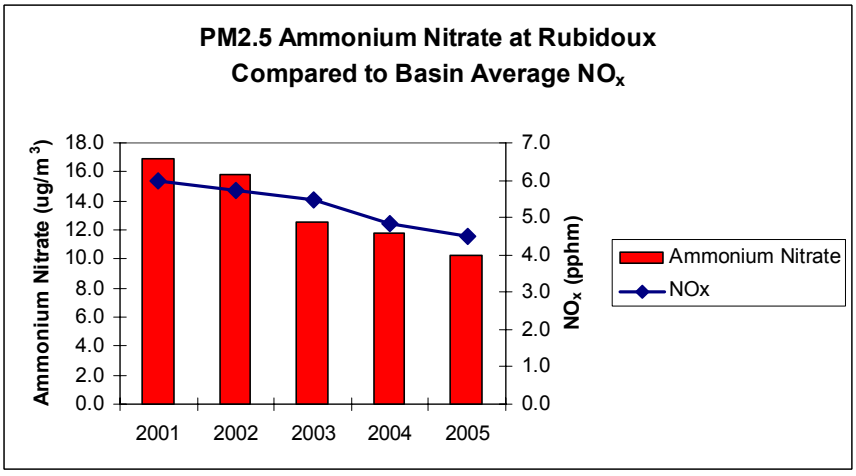
PM2.5 Emission Trends – Steadily Getting Better

Emission control measures adopted to date, especially mobile source controls, have resulted in tremendous progress in reducing PM2.5 in the South Coast. Air quality data collected since initial PM2.5 monitoring began in 1990 show that between 1990 and 1998, PM2.5 annual average concentrations dropped by 30 to 40 percent throughout the air basin. PM2.5 annual average concentrations have dropped a further 20 to 30 percent since the official regulatory monitoring program for the federal PM2.5 standard began in 1999.

The figure below shows that all monitors in the South Coast Air Basin have recorded a significant decrease in annual average design values.[1] The peak annual average design value of 30 ug/m^3 in 2001, twice the level of the federal standard, dropped to 20.8 ug/m^3 in 2006. The South Coast now attains the federal 24-hour standard of 65 ug/ m^3, further demonstrating the progress made in reducing particulate pollution in the region.



The graph below shows that the primary reason for the improvement is the drop in NOx levels. The graph shows the large drop in NOx concentrations measured in the air, and the strong relationship between that drop and the reduction in the measured secondary ammonium nitrate component of PM2.5. The basin's measured ambient NOx average has decreased 25 percent since 2001, while PM2.5 ammonium nitrate concentrations decreased by 40 percent.

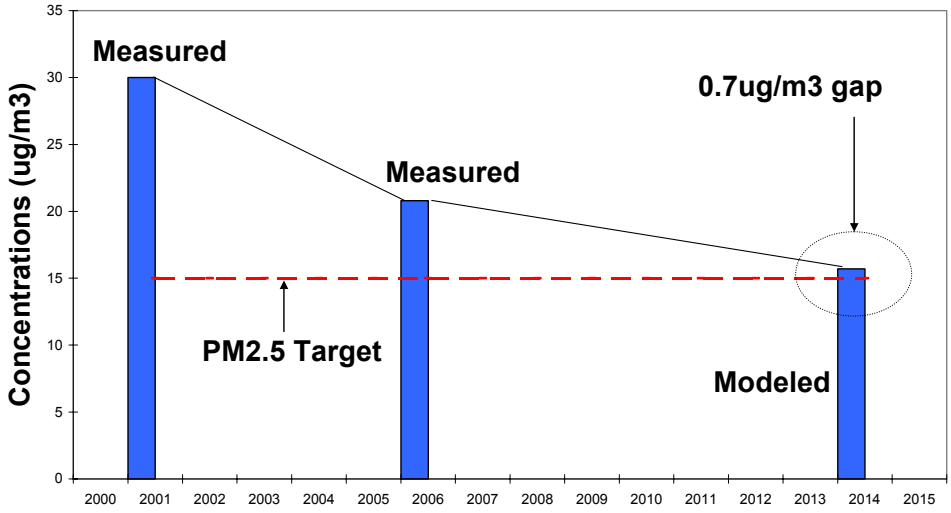


[1] Design values are based on the arithmetic mean of measured levels averaged over three years. So 2001 values are based on average levels from 1999, 2000, and 2001.

The PM2.5 Challenge

PM2.5 progress over the last 15 years shows a trend suggesting that attainment of the standard by 2015 with the proposed State Strategy is possible. The chart below illustrates that progress from 2001 to 2006 gets PM2.5 levels almost two-thirds of the way to meeting the 15 ug/m^3 standard, from 30 ug/m^3 to 20.8 ug/m^3.

South Coast PM2.5 Air Quality and Modeling (Rubidoux)



However, South Coast air district modeling shows a less positive picture. The South Coast air district's most recent modeling, released in February 2007, predicts that although we will get 95 percent of the way to the 15.0 ug/m^3 target by 2014 with adopted and proposed new SIP measures, we will fall just short, reaching only15.7 ug/m^3. The model's prediction that PM2.5 progress will slow down, as indicated by the trend line in the chart above, is somewhat surprising considering that emissions, specifically NOx emissions, are projected to drop by about 6 percent per year from 2006 to 2014 – about twice as fast as they fell between 2001 and 2006.

Even more surprising were the South Coast air district modeling results indicating that it would take over 70 tons per day of additional NOx reductions to bridge the 0.7 ug/m^3 gap. Although measured data show a much greater response to past emission reductions than the model shows with the future reductions, federal rules require the use of models in SIPs. If a NOx-focused approach is used to close the 0.7 ug/m^3 gap, as the South Coast district advocates, much larger NOx reductions than those proposed in the State Strategy will be needed.

Closing the Gap with Direct PM2.5 Reductions

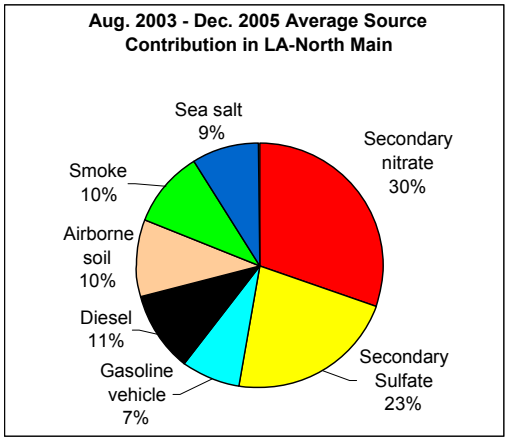
The previous figure shows the magnitude of the 0.7 ug/m^3 gap identified by South Coast air district modeling in relation to the progress we expect with the proposed State Strategy. The progress projected in PM2.5 levels from 2006 to 2014 is largely the result of ARB's existing mobile source control program plus the new measures in the proposed State Strategy. Emissions from mobile sources of NOx and SOx, the two key precursor pollutants of secondary PM2.5, are projected to drop by roughly 55 percent and 75 percent, respectively, between 2001 and 2014. Directly emitted particles from mobile sources are projected to drop 35 percent during this same time.

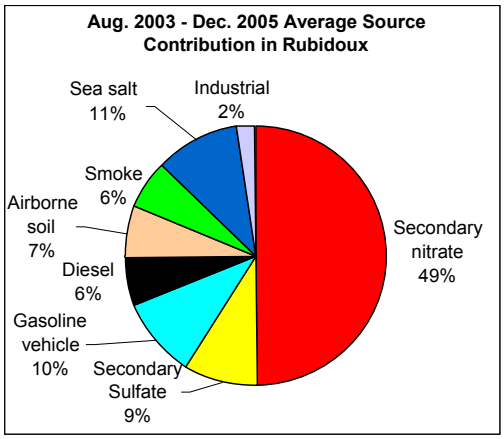
A look at the South Coast air district's emissions inventory shows that directly emitted PM2.5 from sources under district control are projected to increase – not decrease – by about 5 percent between now and 2014. Since the district's modeling indicates that a ton of directly emitted particles has a greater impact on PM2.5 levels than a ton of NOx emissions, the District should explore additional measures to reduce emissions from these sources as a way to cut PM2.5 levels and close the 0.7 ug/m^3 gap.

South Coast PM2.5 Source Contributions

Numerous source apportionment studies have been conducted in the South Coast reflecting snapshots of different sites and time. While the precise contribution varies, these studies have all identified diesel and gasoline vehicle exhaust, smoke from wood burning and cooking, and fugitive dust as important contributors to measured particulate matter concentrations. For this SIP, ARB staff conducted new source apportionment analysis (Positive Matrix Factorization) using monitoring data from 2003 through 2005 at Los Angeles and Riverside. This analysis, in conjunction with the results from past studies and assessment of the current emissions inventory, served as a screening tool to identify potential sources of primary PM2.5 that could provide opportunities for further control.

ARB staff analyzed data from the LA-North Main and Rubidoux monitoring sites using the Positive Matrix Factorization (PMF) analysis method to identify the sources that contributed to PM2.5 captured on filters at those sites. The results of this analysis, illustrated in the pie charts below, indicate that sources of directly emitted particles are significant contributors to PM2.5 concentrations. Two key categories are smoke and airborne soil, which each contribute 6-10 percent to observed annual average concentrations in Los Angeles and Riverside. The smoke category reflects contributions from residential wood burning as well as managed and wildland fires; smoke from commercial cooking is also in this category. The airborne soil category reflects dust kicked up by vehicles traveling on paved and unpaved roads, and dust from construction and agricultural activities.





ARB staff solicited peer review of the recent source apportionment modeling, which concurred that the source contribution estimates were in the ballpark of expected values and suggested improvements for several technical aspects of the source apportionment modeling. Therefore, the body of evidence continues to suggest the significance of sources such as wood burning, cooking, and fugitive dust as opportunities for further targeted control efforts.

Due to the significant population growth in the basin, emissions from residential wood burning, commercial cooking and fugitive dust will continue to increase. Stricter controls are needed to mitigate the emissions growth and provide emission reductions needed for PM2.5 attainment by the 2015 deadline.

Measures for Residential Wood Burning

ARB staff estimates that wood smoke contributes about 1.5 ug/m^3 to measured annual average PM2.5 levels at Rubidoux, based on staff's PMF source attribution analysis. Wood smoke concentrations are higher during the winter months of November through February, when residential wood burning is the most likely source. The analysis also shows that wood smoke levels are higher on weekends and holidays, indicating that much of this residential wood burning s done for ambience and not for home heating purposes. Because the source attribution analysis suggested that residential wood burning was likely a significant part of PM2.5, ARB staff next used the South Coast air district's air quality model to evaluate the potential for reductions.

Residential wood burning rules are feasible. A number of air districts in the State have already adopted comprehensive residential wood burning programs, including the San Joaquin Valley and Great Basin Valley air districts. An important component of these residential wood burning programs is the mandatory curtailment of the use of fireplaces and woodstoves on days with expected high levels of particulate matter. These programs, particularly the San Joaquin Valley's, demonstrate both their feasibility and their cost-effectiveness.

Experience in the San Joaquin Valley has shown that public education about the health impact of wood smoke and the importance of curtailing wood burning is critical. Therefore, a phased approach in the South Coast has the best chance of success. For example, the program could begin as a voluntary program with an aggressive public education and information campaign. This could be followed by a mandatory program to restrict residential burning on selected days from November through February (with exemptions where no alternative heat source or natural gas service is available). Over the course of the program, analysis of measured air quality data would show its effectiveness and allow the district to optimize the program to get the needed reductions by 2014.

ARB staff analyzed the impact of a full moratorium on residential wood burning from November through February using the South Coast district's air quality model. The air quality modeling analysis showed that annual average PM2.5 levels at Rubidoux would drop by 0.9 ug/m^3 with a full moratorium between November and February. ARB staff also did a separate source attribution data analysis to assess the potential impact of a wood burning moratorium. The data analysis corroborated the modeling analysis.

Although assuming a moratorium would be 100 percent effective is not realistic, the potential reductions from a complete moratorium are greater than needed to close the 0.7 ug/m^3 gap. A residential wood burning program would only need to be 80 percent effective to fully close the 0.7 ug/m^3 attainment gap (0.9 ug/m^3 X 0.80 = 0.72 ug/m^3.)

The South Coast air district is currently developing a residential wood burning program, but the staff's most recent draft rule falls short of what is needed for PM2.5 attainment. The South Coast should include a comprehensive suite of requirements in the rule to both minimize the current level of burning, and to prevent further growth in this category. Feasible measures in rules adopted by other California air districts include a mandatory curtailment program, limits on the installation of wood burning devices in new homes and commercial facilities, and the required replacement of non-EPA compliant wood burning stoves.

If measured air quality in 2014 indicates the need, a temporary moratorium in residential wood burning could be implemented. The South Coast's modeling projects that the measures identified in ARB staff's proposed State Strategy will reduce NOx emissions sufficiently to bring the Air Basin into attainment by about 2017, indicating that the district would at some time have the option of lifting the most stringent elements of its localized controls for directly emitted PM2.5.

Enhance Control of Smoke from Commercial Cooking

As discussed previously, some of the smoke particles in the air come from restaurant cooking. By looking at the seasonal profile of the wood smoke levels as well as weekend versus weekday patterns, ARB staff estimated that cooking operations could comprise about one third of the wood combustion contribution

and therefore contribute approximately 0.5 ug/m^3 to annual average PM2.5 at Rubidoux.

The South Coast currently has a rule that applies to chain-driven charbroilers. However, a 1997South Coast survey found that only four percent of restaurant cooking operations operate chain-driven broilers, with the rest operating under-fire broilers, griddles, or deep fat fryers. The Bay Area air district is in the process of developing a new rule that would require the installation of high-efficiency filters on all types of cooking operations.

Therefore, as a further means to reduce direct PM2.5 emissions, the South Coast air district could potentially strengthen its rule along the lines the Bay Area air district is exploring. This would require the installation of high-efficiency filters in both existing and new restaurants for under-fried broilers, griddles, and deep fat fryers, in addition to the existing provisions for chain-driven broilers. If a strengthened rule could get 20 percent reductions from these currently uncontrolled sources, it could reduce Rubidoux PM2.5 levels by another 0.1 ug/m^3.

Strengthen Fugitive Dust Control

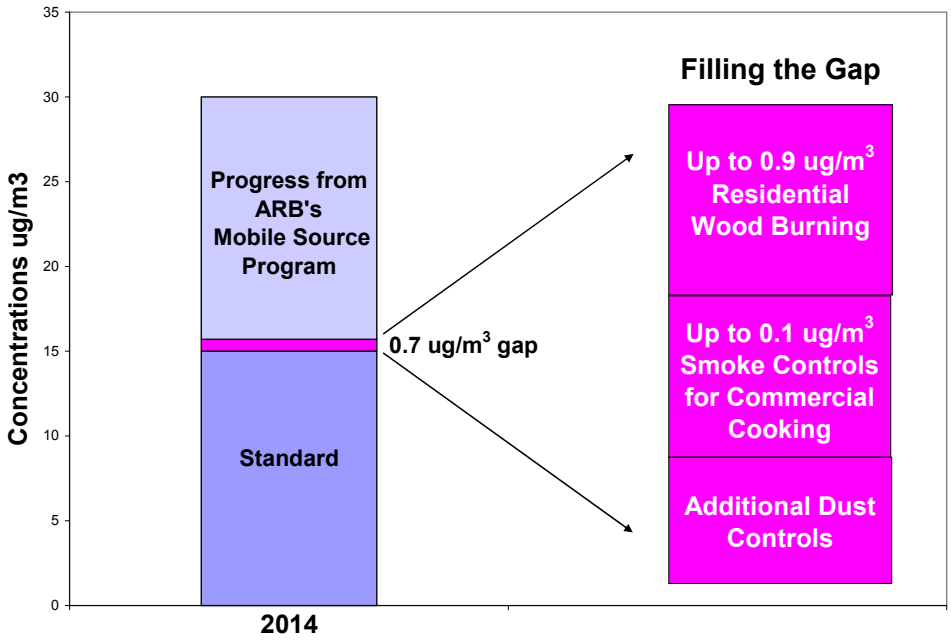
Airborne soil is a third category of directly emitted PM2.5 that can provide an additional opportunity for further emission reductions. The estimated annual average contribution from airborne soil at Rubidoux is approximately 1.6 ug/m^3. Sources of this soil include dust that is generated from travel on paved and unpaved roads, construction and agricultural activities, and dust that is kicked up by high winds.

The South Coast has a comprehensive fugitive dust rule to reduce emissions from these activities. Required mitigation measures include application of water or other chemical stabilizers, paving and landscaping, minimization of dust track-out, and street-sweeping. However, the South Coast air district has adopted more focused dust controls for the Coachella Valley. Applying the focused Coachella Valley dust rules basin-wide may provide additional reductions. Likewise, increased fugitive dust enforcement activities or other targeted measures could be implemented to further reduce this source of PM2.5.

Estimated Impact of Local Direct PM2.5 Measures

These measures – residential wood burning, commercial cooking, and dust -- are reasonable, feasible, and cost-effective. The recommended temporary mandatory wood burning curtailment could be implemented with minor direct cost to the public. Other air districts have already adopted or are pursuing rules implementing these measures. Of course, given the magnitude of the South Coast PM2.5 challenge, the South Coast air district may need to do more.

Using both modeling and PMF analysis, ARB staff quantified potential benefits of the measures. The figure below illustrates how these measures could close the 0.7 ug/m^3 gap to reach attainment by 2015.



Analysis of South Coast Air District Staff's Proposed Additional Mobile Source Measures

As part of its draft plan, the South Coast AQMD has proposed several measures for reducing emissions from on-road and off-road mobile sources that the district staff believes will achieve 70+ additional tons per day of NOx reductions – the additional NOx reductions that the South Coast modeling indicates are needed to meet the PM2.5 standard. ARB staff have reviewed and assessed the proposed measures.

Summary Analysis of South Coast Proposed Mobile Source Measures (NOx emissions, summer planning average tpd)

Measure	AQMD proposed reductions	ARB Staff Assessment	ARB Staff Comments
ATPZEV Penetration	1	0 – 0.1	Penetration of 100,000 vehicles not practical by 2014.
Light-Duty On-Board Diagnostics	3	--	State law currently prohibits used car retrofit requirements.
Heavy-Duty Trucks	21	0-12	Only feasible if subsidized. Funding not secured.
Port Trucks	6	0-6	Only feasible if subsidized. Funding not secured.
Construction Equipment	16	0-16	Only feasible if subsidized. Funding not secured.
Cargo Handling Equipment	1	0-1	Less practical for industry than lease agreements with ports.
Locomotives	16	--	Requires early U.S. EPA standards; ARB is preempted.
Ground Support Equipment	1	0-0.2	LAX settlement agreement covers 70% of GSE NOx emissions.
Transport Refrig-eration Units	1	--	Not technically feasible.
Recreational Boats	1	0-1	Not practical on this scale. Funding not secured.
Lower sulfur gasoline	5	--	Not necessary. Reductions already accounted for.
Further reductions from diesel fuel	4	--	Not cost-effective. High total cost.
Total	71	0-36	About half of the tons are technically feasible, but only if subsidized at a cost in the billions of dollars.

The bulk of the additional NOx reductions from the South Coast staff's proposed measures are from sources already identified for aggressive new controls in the State Strategy: heavy-duty trucks, port trucks, large off-road equipment, and locomotives. The State Strategy is estimated to achieve 322 tons per day of NOx reductions from already-adopted measures and 122 tons per day of NOx reductions from proposed new measures in the South Coast Air Basin by 2014. The State Strategy includes proposed measures to turn over and clean up the existing fleet of diesel vehicles and equipment at a scale that far exceeds anything attempted in the regulatory landscape to date.

The South Coast air district staff's proposal looks to reduce 71 additional tons per day of NOx through public funding assistance that would be used to increase the rate of turnover and clean up of the legacy fleet beyond that of the State Strategy. It estimates the public funding need at $600 million per year from 2009 through 2014, for a total of $3 billion.

ARB staff agrees with the South Coast air district staff's assessment that the district's suggested measures will cost billions of dollars, but ARB staff believes that only about 50 percent of the reductions, at most, are technically feasible even if subsidized. ARB staff believes that the turnover necessary to get reductions of this magnitude in this short time frame would not be possible. Furthermore, the funding for the scale of the measures envisioned by the South Coast air district staff is not currently available, so the measures cannot be included as approvable measures in the SIP.

The following is a brief assessment of each of South Coast air district staff's proposed measures:

<u>Accelerated Penetration of ATPZEVs (SCONRD-01)</u>

Measure summary:
This measure proposes that ARB use a combination of mandates and incentives to increase sales of advanced technology partial zero emission vehicles (ATPZEVs) that have an all-electric drive range (i.e. plug-in hybrid vehicles) to 100,000 vehicles in the South Coast by 2014, and 1,000,000 vehicles by in the South Coast by 2020. The district estimated reductions of 1.0 tpd NOx and 0.5 tpd VOC in 2014. The AQMD did not conduct a cost-effectiveness analysis.

ARB staff assessment:
Availability of an almost all-electric drive range ATPZEV is unrealistic based on available technology. Most optimistic projections indicate that 10,000 plug-in hybrids with a 10 mile drive range could be on the road in California by 2014 if three to four automobile manufacturers commit to producing them. The cost of plug-in hybrid vehicles could be approximately $2,000-5,000 more than hybrid vehicles on the market today. The uncertainty surrounding plug-in hybrids stems from the higher cost of larger batteries and commitment from automobile manufacturers to produce these vehicles.

Conversion of current ATPZEVs to plug-in hybrids is technologically possible, but not feasible on this scale under the South Coast proposed timeframe. Conversion packs used to enhance current hybrid technology have not been certified to meet safety or emission standards.

OBD III for Light and Medium-Duty Vehicles (SCONRD-02)

Measure summary:
This measure would require a higher level of on-board diagnostics (OBD III) on all new vehicles starting in 2012, and would require that existing 1996-2012 vehicles be retrofitted with OBD III by 2020. It would achieve about 0.5 tpd NOx in 2014 at a total retrofit cost of $746 million, plus additional costs for new vehicles built in 2013 and later.

ARB staff assessment:
State law (Health & Safety Code section 43600) prohibits ARB from requiring the installation of control devices on used motor vehicles except when required or authorized by statute. Statutes enacted since have given ARB authority to require retrofit controls on heavy-duty vehicles. But no such statute has been enacted for light-duty vehicles, so ARB's authority to mandate the installation of OBD retrofit kits on used light-duty vehicles is unclear. Consumer acceptance is also an issue.

Further Emission Reductions from On-Road Heavy-Duty Vehicles (SCONRD-03)

Measure summary:
This proposed measure calls for the reduction of 21 tons per day of NOx in 2014 beyond the State Strategy's proposed fleet modernization measure. The State Strategy's proposed measure would achieve reductions equivalent to replacing 30 percent of the heavy-duty fleet by 2014. The district's proposal would retrofit or replace an additional pre-2010 or trucks at the rate of 15 percent per year above the proposed ARB program..

ARB staff assessment:
To achieve the 21 tons per day of NOx reduction estimated, ARB staff estimated that more trucks would need to be replaced or retrofited in the 2011-2014 timeframe than suggested in the district's proposal, and that NOx retrofit efficiencies would need to be significantly higher than today's technology. Currently, only one low-NOx catalyst device is verified for a 30 percent NOx reduction, and no devices are verified for on-road use that have a higher NOx removal efficiency.

Using South Coast's proposed strategy, ARB staff has estimated a 12 tons per day NOx reduction at an estimated cost of $812 million. This strategy could be implemented using available technology; however, it would add almost $1 billion to the cost of the very aggressive fleet modernization proposed by ARB.

Further Emission Reductions from Heavy-Duty Trucks providing Freight Drayage Services (SCONRD-04)

Measure summary:
This proposed measure would retrofit and replace port trucks so that much of the port truck fleet would meet 2007-2010 standards by 2012, and the remainder would be equipped with PM and NOx retrofit devices. The district's proposal would achieve approximately an additional 6 tons per day NOx reduction in 2014 for an investment of over $1.8 billion. About half the replacement engines would use alternative fuels.

ARB staff assessment:
The technology for this proposed measure should be available; however, it is unknown how many alternative fuel engines will be certified to the 2007 and 2010 standards. This measure is dependent on securing sufficient incentive funding and is only feasible if subsidized.

Construction/Industrial Equipment Fleet Modernization (SCOFFRD-01)

Measure summary:
This measure proposes to reduce an additional 16 tons per day of NOx in 2014 from large off-road equipment by achieving a 2018 fleet average in 2014 (equivalent of ~Tier 3) with emission reductions equivalent to repowering all Tier 0 and Tier 1 equipment with Tier 3 or better engines (i.e., 2010 on-road engines). In 2020, the measure proposes to get reductions equivalent to repowering all Tier 2 equipment with Tier 4 or better engines and retrofitting all Tier 3 engines with selective catalytic reduction (SCR).

ARB staff assessment:
It is not technologically feasible to repower all Tier 0 and Tier 1 equipment with Tier 3 engines due to space constraints and other considerations. Repowers with Tier 4 engines will be even more challenging, if possible at all. Because of these technological constraints, a significant portion of the off-road equipment would have to be replaced to achieve the projected reductions. Equipment replacement is more expensive than repowering, and would substantially increase the cost of this measure and the magnitude of subsidies needed.

This measure is feasible only if subsidized. The increased costs of replacing equipment makes the proposed measure much less feasible from a cost-effectiveness standpoint.

Further Reductions from Cargo Handling Equipment (SCOFFRD-02)

Measure summary:
This measure would require the repowering of non-yard trucks (i.e., container cranes and loaders, front-end loaders, bulldozers, etc.) with Tier-4 offroad engines or the retrofitting of these engines with SCR. This measure is designed

to be phased in and to reduce NOx emissions from such equipment by 30%, and a total of 1 ton per day of NOx, by 2014.

ARB staff assessment:
The repowering of non-yard trucks with Tier-4 engines will be difficult due to the larger engine compartments required for these advanced emission control power systems in comparison to in-use engine compartments. As a result, many vehicles would probably be retrofitted with SCR systems in order to comply. While there are no technological barriers to SCR retrofits on these vehicles, the cost of these modifications will increase the capital investment requirements for terminal operators. Lease provisions requiring the same improvements will allow terminal operators to be eligible for subsidies from the Ports of Los Angeles and Long Beach.

Further Reductions from Locomotives (SCOFFRD-03)

Measure summary:
This measure recommends retrofitting remaining Tier 2 locomotive engines with DPF and SCR technology to achieve Tier 4 emission levels, which the district projects would reduce NOx emissions by an additional 11 tons per day of NOx in 2014.

ARB staff assessment:
The State Strategy proposes an aggressive penetration rate to introduce Tier 4 engines and retrofits for Tier 2 engines that depends on U.S. EPA adopting strict standards that go into effect before 2014. (U.S. EPA has proposed standards for new engines that go into effect by 2017; however, ARB staff continues to make the case that California needs earlier implementation.) The retrofit technology needed to bring locomotives up to Tier 4 standards has not been tested on locomotives as large as the long-haul locomotives used in the U.S. The availability of proven and tested technology at the scale envisioned is unsure. Since there is uncertainty about the introduction of the new standards prior to 2014, staff believes that the 4 tons per day of NOx emission reductions from locomotives in the South Coast proposed in the State Strategy is the maximum commitment that should be made by the Board given the federal preemption.

Emission Reductions from Airport Ground Support Equipment (SCOFFRD-04)

Measure summary:
This measure proposes to reduce NOx emissions from ground support equipment by an additional 0.8 tons per day in 2014 through increased electrification and a lower fleet average.

ARB staff assessment:
A Stipulated Agreement settling litigation between the owners of Los Angeles International Airport (LAX) and neighboring cities over environmental impacts resulting from airport expansion requires LAX to implement a phased program to convert all ground support equipment to “extremely low emission technology

(such as electric power, fuel cells, or other future technological developments)" by 2015. This agreement will cover 70 percent of all ground support equipment in the air basin. If subsidized, this proposed measure could possibly achieve 0.2 tons per day of NOx from the remaining ground support equipment at the other airports in the air basin.

Further Emissions Reductions from Transport Refrigeration Units (SCOFFRD-05)

Measure summary:
This measure proposes to retrofit in-use transport refrigeration units (TRUs) with SCR systems to reduce NOx emissions by 80 percent, reducing NOx by 1.1 additional tons per day by 2014.

ARB staff assessment:
This measure has not been demonstrated to be technologically feasible due to the lack of SCR system testing on engines as small as those powering TRU systems. SCR is most effective when used in systems that can maintain a high, constant exhaust temperature to support the reaction that occurs on the catalyst's surfaces. In general, SCR is not viable for engines of less than 150 horsepower as they do not usually reach or maintain the needed exhaust temperatures.

Accelerated Turnover and Catalyst Based Standards for Pleasure Craft (SCOFFRD-06)

Measure summary:
This proposed measure calls for providing $52 million in incentives in 2014 for Southern Californians to purchase new recreational boats and jet skis sooner than they would have without the incentives. It is estimated to achieve 1 ton per day of additional NOx reductions in 2014.

ARB staff assessment:
While technically feasible if subsidized, it is not practical to assume that 50,000 recreational boats and jet skis could be replaced in a very short period of time. No pilot projects have been conducted to test the feasibility and/or success of incentive-based replacement programs for pleasure craft.

Further Emission Reductions from Gasoline Fuels (SCFUEL-01)

Measure summary:
This measure calls for ARB to adopt a sulfur content limit of 10 ppm for future gasoline fuels, reducing NOx an estimated 5 tons per day by 2014.

ARB staff assessment:
This measure is not necessary. The South Coast air district analyzed the potential emissions reductions using the sulfur cap limits specified in the California reformulated gasoline (CaRFG) regulations. However, while the cap limit for sulfur is 30 parts per million by weight (ppmw), the average sulfur content

in gasoline marketed in California is 10ppmw. The emission benefits from this low sulfur gasoline have been used to allow other CaRFG limits to increase while minimizing costs and maximizing production.

The Board is tentatively scheduled to consider amendments to the CaRFG regulation in June that would offset the increase in hydrocarbon evaporative permeation emissions resulting from the use of ethanol. The only practical path to offset this increase in hydrocarbon emissions is to use more ethanol, going from an average of 5.7% to 10% ethanol content. While this decreases hydrocarbon emissions, it increases emissions of NOx. , Refiners are expected to decrease sulfur levels even further to avoid this NOx increase, and as a result future CaRFG-compliant gasolines are expected to have an average of 5 to 7ppmw sulfur. This is approximately the sulfur content that refiners would aim for to ensure continued compliance with a 10ppmw cap. This means that there are no emission benefits to be gained from adopting a 10ppmw sulfur limit.

Further Emission Reductions from Diesel Fuels (SCFUEL-02)

Measure summary:
This measure calls for ARB to adopt new regulations requiring the use of diesel fuel alternatives to replace 10 percent of conventional diesel fuel, reducing NOx emissions by an additional 4 tons per day by 2014.

ARB staff assessment:
South Coast staff expects the largest portion of the diesel fuel alternatives to be met through the use of gas to liquid (GTL) diesel, which has zero sulfur. They project that GTL diesel will cost 15 cents more per gallon than conventional diesel. ARB staff believes that the South Coast staff estimated cost for the GTL is low by a factor of 2 to 5. The cost to produce GTL is about $0.15 per gallon higer than the cost production cost of diesel, but this is based on the natural gas feedstock being virtually free. The cost of transporting the fuel to California, would add approximately another $0.15 per gallon. In addition, California would have to compete with the rest of the world to obtain GTL diesel, which means we would have to pay an “incentive cost” – we would have to pay more than other countries that also prize GTL for its ability to improve the overall quality of diesel. These factors make the proposed measure not feasible due to total cost and emission reduction cost-effectiveness.

How to Advance South Coast PM2.5 Attainment – Recommendations for Board Consideration

ARB staff has assessed the PM2.5 challenge in the South Coast starting with the premise that, as shown by South Coast air district modeling, additional measures are needed to reduce PM2.5 levels by 0.7 ug/m^3. ARB staff has concluded the following:

- Given the PM2.5 progress measured over the last 15 years, and the new emission reductions that will occur, the South Coast may attain the standard by 2015 with the mobile source measures in the proposed State Strategy. Nevertheless, U.S. EPA requires the use of models in SIPs to demonstrate attainment; therefore, additional emission reductions should be identified.

- The large new NOx and SOx reductions from mobile sources identified in the proposed State Strategy will provide the vast majority of the emission reductions that will occur by 2015.

- Reversing the trend of rising PM2.5 emissions from sources under air district control through aggressive local measures to reduce directly emitted PM2.5 is critical to attainment.

- Closing the 0.7 ug/m^3 attainment gap by 2015 with additional NOx reductions is not realistic. The South Coast air district's suggested mobile source measures are not feasible without billions of dollars of unsecured subsidies.

- Feasible local air district measures for residential wood burning, commercial cooking, and dust exist to close the 0.7 ug/m^3 gap and reach attainment by 2015.

5. PROPOSED NEW SIP MEASURES – Descriptions

Introduction

ARB staff is proposing a comprehensive and far reaching set of new measures to achieve emission reductions needed to address California's most challenging ozone and PM2.5 problems. These measures are designed to make maximum progress toward the federal 8-hour ozone standard in the South Coast and the San Joaquin Valley. The measures include aggressive near-term NOx and SOx emission reduction goals, reflecting the nature and scope of the PM2.5 problem in these regions. To achieve the emission reductions needed for both ozone and PM2.5, the State Strategy proposes new near-term actions that can be completed by 2010 or soon thereafter.

Need for Fleet Modernization

More than any other air pollution control effort, ARB's mobile source program has moved the State's nonattainment areas closer to meeting federal air quality standards. California has dramatically tightened emission standards for new on-road and off-road mobile sources and fuels. As new engines have become cleaner and cleaner, the emissions contribution from older vehicles has been growing to the extent that it will soon make up the majority of mobile source emissions. For example, by 2014, heavy-duty trucks 14 years or older will produce 51 percent of total heavy-duty truck NOx emissions while only traveling 20 percent of total truck miles. The same holds true for all on-road vehicles combined, where vehicles over 14 years old will produce almost 60 percent of total NOx emissions by 2014 but just 20 percent of total miles traveled.

The benefits of in-use control programs are limited by the underlying engine technology and controls. As a result, the majority of new measures in the State Strategy are "in-use" measures – programs to help clean up or replace older, dirtier vehicles and equipment. We simply cannot wait for the natural turnover of older vehicles and equipment (1-5 percent annual turnover depending on vehicle or equipment type) being replaced with newer, cleaner vehicles. The challenge is that these measures have a much more direct impact on businesses and individuals in California than do new engine standards that must be met by manufacturers. ARB's fleet rules will affect owners of public and private vehicles and equipment that operate in nonattainment areas throughout the State.

Compliance flexibility has historically been included in ARB regulations – allowing the most cost-effective methods to be used by those who must meet emission requirements. And while lower-cost add-on control devices can play a role in lowering emissions from mobile fleets, more costly engine and vehicle replacements will be needed in many cases. This will place a substantial financial burden on owners of vehicles and equipment but is necessary in order to achieve air quality standards. Increased incentive funds can supplement ARB's regulatory actions and further accelerate air quality progress. It is important to recognize that at current funding levels, incentive funds can pay for

only a relatively small portion of the cost for necessary modernization of California's diesel engine fleets.

The nature of the proposed new measures (enforceable rules) and California's history of supportive financial incentives provide a sound basis for reductions from incentive programs to meet federal requirements for SIP approval.

Accountability for Emission Reductions

California's SIP must outline the plan for meeting air quality standards in all of its nonattainment areas. ARB staff's SIP State Strategy proposal for Board approval includes an enforceable commitment to achieve the overall goals set. The details of each new measure are publicly considered during separate formal rulemaking processes. If a particular measure does not ultimately achieve the emission reductions estimated in the SIP, the State is still bound to achieve the total aggregate emission reduction commitment, whether this is realized through additional reductions from other new measures, or from alternative control measures or incentive programs.

Summary of Proposed New SIP Measures

ON-ROAD SOURCES

Passenger Vehicles

Improvements and Enhancements to California's Smog Check Program

Low Pressure Evaporative Test. Require low pressure evaporative system testing and repair of evaporative system leaks for all vehicles subject to Smog Check inspection.

More Stringent Cutpoints. Set more stringent pass/fail cutpoints to ensure more cars would have more complete and durable repairs.

Annual Inspections for Older Vehicles. Inspect older vehicles annually rather than every two years. Older vehicles tend to have greater deterioration of emission controls, and consequently, higher emissions.

Annual Inspections for High Annual Mileage Vehicles. Inspect annually, rather than every two years, vehicles that accrue very high mileage on an annual basis. High mileage vehicles tend to have greater deterioration of emission controls and, consequently, higher emissions.

Add Visible Smoke Test. As part of the Smog Check test, include a check for visible smoke to identify vehicles with excess particulate matter emissions.

Inspection of Light- and Medium-Duty Diesels. Include light- and medium-duty diesel vehicles in the Smog Check program to provide for improved maintenance and reduced emissions for this part of the fleet, and require the repair of poorly maintained or old emission systems.

Inspection of Motorcycles. Include motorcycle inspections as part of Smog Check. Studies indicate that motorcycles are subject to high rates of exhaust system tampering.

Expanded Passenger Vehicle Retirement. Increase the number of vehicles that are voluntarily retired by implementing a scrappage program for vehicles that are off-cycle from their Smog Check inspections.

Modifications to Reformulated Gasoline Program. Modify California's Reformulated Gasoline Program to offset ROG emissions due to the increased use of ethanol. This rulemaking activity is currently underway and is intended to fully mitigate the emission increase, which has been incorporated in the current emissions inventory.

Trucks

Cleaner In-Use Heavy-Duty Trucks. This proposed measure is a comprehensive in-use diesel truck emissions reduction program that includes a fleet modernization rule and an excess emissions program. Fleet modernization would focus on overcoming the typically slow rate of heavy-duty truck turnover by requiring truck owners to meet specified emission levels through replacing or cleaning up the oldest trucks in their fleets, and would also include a program for out-of-state trucks. The excess emissions program would target deterioration emissions to keep ultra-clean trucks running cleaner longer.

GOODS MOVEMENT SOURCES

Ship Auxiliary Engine Cold Ironing and Other Clean Technology. Reduce emissions from ships at berth with at-dock technologies such as cold ironing (electrical power) and other clean technologies.

Cleaner Ship Main Engines and Fuel. Further reduce emissions from main engines through added retrofits such as selective catalytic reduction. Support efforts by ports and appropriate local entities to accelerate use of cleaner ships and rebuilt engines through other tools such as lease restrictions. Require ships to use low sulfur diesel fuel in main engines when operating within 24 nautical miles of shore.

Port Truck Modernization. Retrofit or replace older heavy-duty diesel trucks that service ports. Work with port authorities to prevent adding older trucks to the fleet. ARB rulemaking process for this proposed measure has begun in parallel with development proposals by the Ports of Los Angles and Long Beach.

Accelerated Introduction of Cleaner Line-Haul Locomotives. Replace existing locomotive engines with cleaner Tier 4 engines beginning in 2012 and conduct concurrent rebuilds of older engines to Tier 2.5 standards. This measure requires early introduction of U.S. EPA Tier 4 standards.

Clean Up Existing Commercial Harbor Craft. Require owners of existing commercial harbor craft to replace old engines (both propulsion and auxiliary) with newer cleaner engines and/or add emission control technologies that clean up engine exhaust. ARB rulemaking for this proposed measure is underway.

OFF-ROAD SOURCES

Construction and Other Equipment

Cleaner In-Use Off-Road Equipment. Establish fleet average emission limits for off-road equipment (over 25 horsepower) that would require older, dirtier engines to be replaced with engines reflecting current technologies or retrofitted with emission control devices. ARB rulemaking for this proposed measure is in process.

Agricultural Equipment

Agricultural Equipment Fleet Modernization. Accelerate the modernization of the fleet of agricultural equipment used in California, removing older, dirtier equipment from service to be replaced with engines reflecting cleaner technologies.

Evaporative and Exhaust Strategies

New Emission Standards for Recreational Boats. Adopt catalyst-based standards (5 g/kW-hr) for new outboard and personal water craft (jet ski) engines and evaporative emission standards to address all sources of recreational boat evaporative emissions.

Off-Road Recreational Vehicle Expanded Emission Standards. Adopt exhaust and evaporative emission standards to reduce the amount of ROG from off-highway motorcycles and all-terrain vehicles.

Additional Evaporative Standards *Portable Outboard Marine Tank Evaporative Standards.* Set evaporative standards for removable fuel tanks used on outboard recreational boats. *Refueling Gasoline Tank Evaporative Standards.* Set evaporative standards for refueling gasoline tanks typically mounted on pickups and large recreational vehicles and used to refuel equipment and other smaller vehicles. *Gas Station Refueling Hose Evaporative Standards.* Set evaporative standards for gas station pump hoses.

Enhanced Vapor Recovery for Above Ground Storage Tanks. Implement an enhanced vapor recovery certification process and new performance standards and specifications for large fuel tanks used extensively in agricultural operations.

AREAWIDE SOURCES

Consumer Products

Tighten Standards. Tighten standards or require product reformulation for consumer products categories through several rulemakings through 2012.

Pesticides

New Pesticide Strategies. The California Department of Pesticide Regulation will reduce emissions from commercial and agricultural pesticide use in California through reformulation, reduced usage, and innovative technologies and practices.

Improvements and Enhancements to California's Smog Check Program

California's passenger vehicle emissions standards have been extremely effective -- a new 2005 car was 97 percent cleaner than a new 1980 car. In order to reduce the emissions necessary to reach air quality goals, however, the focus must shift to keeping vehicles clean over their lifetimes. The Smog Check program is the cornerstone of this effort, keeping over 400 tons of smog-forming emissions from entering the air each day.

The State Strategy envisions an even stronger Smog Check program, adding tests that will reduce excess emissions and including vehicle types that are now exempt to better ensure that all passenger vehicles in California keep running clean. Staff has estimated that adding the following tests to Smog Check will reduce ROG and NOx emissions from passenger vehicles another 10 percent in 2014. This equates to reducing about 11 tons per day of ROG and 12 tons per day of NOx in the South Coast in 2014.

Low Pressure Evaporative Test

Over half of smog-forming emissions from 1976 through 1995 cars comes from fuel evaporating from leaks in the fuel system. A functional check of the gas cap is currently included in Smog Check, but not a check of the vehicle's fuel tank and vapor lines, which play an important part in controlling evaporative emissions. This measure would add a low pressure evaporative test to Smog Check to examine for leaks in the fuel tank and vapor lines.

More Stringent Cutpoints

One approach to getting more complete repairs and lower emissions is to increase the stringency of the inspection standards (cutpoints) used to determine if the vehicle initially passes or fails. This measure would set more stringent cutpoints, ensuring that more cars would have more complete and durable repairs.

Annual Inspections for Older Vehicles

Vehicles 15 years or older have a failure rate more than twice the average. This measure would require older vehicles to be tested annually, shortening the time they are emitting excess emissions prior to being repaired.

Annual Inspections for High Annual Mileage Vehicles

About 3 percent of cars are driven over 25,000 miles per year. These vehicles fail Smog Check at about twice the average rate. This measure would require high-mileage vehicles to be tested annually which would shorten the time they are emitting excess emissions prior to being repaired.

Add Visible Smoke Test.
Excess soot from smoking passenger vehicles is estimated at about one and a half tons per day statewide and is a public health concern. An inspection for excessive smoke is currently not part of the Smog Check program, but soon will be due to newly enacted legislation (AB 1870, Lieber, Chapter 761 of 2006) that establishes visible smoke as a cause for Smog Check failure.

Inspection of Light- and Medium-Duty Diesels.
There are over 200,000 diesel passenger cars and trucks operating in California. While diesel vehicles have low ROG emissions, older diesels tend to emit higher levels of NOx and particulate matter than gasoline vehicles. Diesel vehicles, however, are not currently required to take part in the Smog Check program. This measure would develop a Smog Check inspection program for diesel passenger cars and trucks that would allow identification and repair of high-emitting diesel vehicles.

Inspection of Motorcycles.
There are about 400,000 motorcycles registered in California. They are currently exempt from Smog Check. While motorcycles do not have a high rate of emission control deterioration, surveys indicate a high level of exhaust system tampering. This measure would require some form of motorcycle Smog Check inspections to help reduce excess motorcycle emissions.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	245	138	109	98
	Emission reductions:				
	Low Pressure Evaporative Test		**4.1**	**3.2**	**2.2**
	More Stringent Cutpoints		**0.8**	**0.6**	**0.6**
	Annual Inspect Older Vehicles		**3.1**	**2.5**	**2.3**
	Annual Inspection for High Annual Mileage Vehicles		**0.5**	**0.4**	**0.4**
	Inspection of Motorcycles		**2.0**	**2.0**	**2.0**
	Total potential reductions		**10.5**	**8.7**	**7.5**
NOx	Baseline emissions	243	128	88	74
	More Stringent Cutpoints		**2.0**	**1.4**	**1.1**
	Annual Inspect Older Vehicles		**7.2**	**4.9**	**4.2**
	Annual Inspection for High Annual Mileage Vehicles		**1.6**	**1.1**	**0.9**
	Inspection of Light- and Medium-Duty Diesels		**0.6**	**0.3**	**0.1**
	Inspection of Motorcycles		**0.6**	**0.6**	**0.6**
	Total potential reductions		**12.0**	**8.3**	**6.9**
PM2.5	Baseline emissions	6.2	7.8	9.0	9.4
	Add Visible Smoke Test		**0.2**	**0.2**	**0.2**
	Inspection of Light- and Medium-Duty Diesels		**0.02**	**0.01**	**< 0.01**
	Total potential reductions		**0.2**	**0.2**	**0.2**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	77	48	36	34
	Low Pressure Evaporative Test		**0.8**	**0.6**	**0.4**
	More Stringent Cutpoints		**0.2**	**0.2**	**0.2**
	Annual Inspect Older Vehicles		**0.7**	**0.5**	**0.5**
	Annual Inspection for High Annual Mileage Vehicles		**0.2**	**0.1**	**0.1**
	Inspection of Motorcycles		**1.0**	**1.0**	**1.0**
	Total potential reductions		**2.9**	**2.2**	**1.9**
NOx	Baseline emissions	68	40	28	24
	More Stringent Cutpoints		**0.4**	**0.3**	**0.2**
	Annual Inspect Older Vehicles		**1.5**	**1.1**	**0.9**
	Annual Inspection for High Annual Mileage Vehicles		**0.8**	**0.5**	**0.5**
	Inspection of Light- and Medium-Duty Diesels		**0.3**	**0.2**	**0.2**
	Inspection of Motorcycles		**0.3**	**0.3**	**0.3**
	Total potential reductions		**3.3**	**2.4**	**2.1**
PM2.5	Baseline emissions	1.4	1.8	2.1	2.4
	Add Visible Smoke Test		**0.05**	**0.05**	**0.05**
	Inspection of Light- and Medium-Duty Diesels		**< 0.01**	**< 0.01**	**< 0.01**
	Total potential reductions		**0.05**	**0.05**	**0.05**

Baseline emissions reflect adjustments not included in the SIP Emission Inventory Projections on ARB's website. The adjustments include criteria pollutant benefits from the greenhouse gas limits for motor vehicles adopted in 2004 and emission reductions from the Carl Moyer Program.

Baseline emissions are for all light- and medium-duty passenger cars, SUVs and trucks, and all gasoline heavy-duty trucks. Reductions have been estimated in the following manner:

Low Pressure Evaporative Test—ARB staff has estimated the percent reduction in emissions from the low pressure test using before and after repair data collected in two studies done by ARB and one U.S. EPA study. The percent reduction was estimated separately for hot soak, diurnal, and running loss evaporative emissions. The percent reductions were then applied to EMFAC baseline evaporative emissions for the light duty fleet in order to calculate evaporative emissions benefits in tons per day.

More Stringent Cutpoints—The reductions are based on more stringent initial inspection standards (cutpoints) taken from a study by Sierra Research using failure rate data collected from the California, Arizona, and Wisconsin inspection programs. Sierra Research identified model year groups of vehicles for which cutpoints could be lowered and estimated the impact on emission rates for each group. The fractional changes in emission rates were then applied to EMFAC baseline emissions to calculate emissions benefits in tons per day.

Annual Inspections for Older Vehicles—Staff used the EMFAC emissions model to estimate the emissions reductions of an annual inspection compared to biennial inspection. EMFAC allows the user to choose either an annual or biennial program. Emission reductions were estimated by comparing the emissions with an annual program to those with a biennial program for vehicles over 15 years old. 15 years of age was selected because this is the point at which vehicles start failing at twice the fleet average yet account for less than 25 percent of Smog Check tests.

Annual Inspections for High Annual Mileage Vehicles—ARB conducted a voluntary inspection program on high mileage taxi cab fleets in the San Francisco and Los Angeles areas. Smog Check data suggest that up to 3 percent of the fleet accumulates high annual mileage. The estimated reductions from 20,000 taxicabs were ratioed to the assumed 3 percent of the enhanced program area fleet driven high mileage. We assumed that one-half of the 3 percent of the fleet that are high annual mileage vehicles would be identified as accruing high annual mileage, tested annually, and repaired, resulting in emission reductions.

Visible Smoke Test—Based on data from a survey done for South Coast AQMD, Sierra Research has estimated that approximately 200,000 smoking gasoline vehicles are driven daily statewide. Based on data from the South Coast survey and data from Southwest Research Institute testing, the benefits of repairing a smoking vehicle average 0.25 gram/mile. We are assuming that half of the 200,000 smoking vehicles would fail the current tailpipe test in Smog Check. We have estimated benefits for the visible smoke test by assuming it would fail the other half (100,000) of the smoking vehicles per biennial cycle, which equals 50,000 failures per year. Reductions statewide are based on repairing 50,000 vehicles driving 30 miles per day with a 0.25 gram/mile total PM reduction.

Inspection of Light and Medium Duty Diesels- Benefits are based on an inspection program as stringent as the current program for gasoline cars and trucks. We are assuming a diesel inspection program would get the same

percent reduction in emissions that the current enhanced Smog Check program is achieving.

Inspection of Motorcycles—Benefits are based on assuming a motorcycle inspection program would get half of the percent reduction in emissions that the current enhanced Smog Check program is achieving.

Timing

Action: 2007-2008
Expected Implementation: By 2010

Staff Proposed SIP Commitment

ARB staff proposes to work with BAR to begin to implement the measure in 2010. ARB and BAR staff will initiate an effort to develop program improvements to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as implemented may provide more or less than the amount shown.

Expanded Passenger Vehicle Retirement

The bulk of emissions from passenger vehicles comes from older vehicles. The Smog Check program helps older California cars run cleaner. To meet clean air goals, however, we need to reduce emissions from these older vehicles even more. Owners of vehicles that fail Smog Check inspections are currently given the option of fixing their vehicles or receiving a monetary incentive for voluntarily retiring them. This measure would expand the Smog Check vehicle retirement program to vehicles that are off-cycle from their Smog Check inspections.

It is estimated that the vehicle retirement program could increase its scope from the current 18,000 vehicles per year statewide to approximately 50,000 per year in the South Coast and 10,000 per year in the San Joaquin Valley, which reflects retiring about half of one percent of vehicles subject to Smog Check in each region. The annual retirement of these vehicles in the South Coast and San Joaquin Valley would result in combined ROG and NOx emissions benefits of 2 percent of passenger vehicle emissions in 2014.

Funding for vehicle retirement at both State and local program levels comes from fees on newer cars exempt from Smog Check. Increasing the scope of the program post 2010 would require additional State or local funding.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	206	112	86	76
	Potential reductions		**2.8**	**1.2**	**0.5**
NOx	Baseline emissions	204	101	65	53
	Potential reductions		**2.4**	**1.3**	**0.2**
PM2.5	Baseline emissions	9.4	7.7	8.6	9.0
	Potential reductions		**0.05**	**0.06**	**0.06**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	62	37	27	24
	Potential reductions		**0.7**	**0.3**	**0.1**
NOx	Baseline emissions	58	31	19	16
	Potential reductions		**0.5**	**0.3**	**0.04**
PM2.5	Baseline emissions	2.1	1.8	2.0	2.2
	Potential reductions		**0.01**	**0.01**	**0.01**

Baseline emissions include emissions from light- and medium-duty passenger cars, trucks and sport utility vehicles. Baseline emissions reflect adjustments not included in the SIP Emission Inventory Projections on ARB's website. The adjustments include emission reductions from the Carl Moyer Program and

criteria pollutant benefits from the greenhouse gas limits for motor vehicles adopted in 2004.

Emission reductions were estimated assuming a 3-year credit life and that, on average, 16-year-old vehicles will be replaced with 8-year-old vehicles. These assumptions are based on data collected in ARB's Voluntary Accelerated Light-Duty Vehicle Retirement Program.

Timing

Action: 2008 - 2014
Expected Implementation: 2008 - 2014

Staff Proposed SIP Commitment

ARB staff proposes to work with BAR to begin implementing the measure by 2008. ARB and BAR staff will initiate an effort to expand the existing program to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as implemented may provide more or less than the amount shown.

Modifications to Reformulated Gasoline Program

Gasoline fuel combustion is the major source of energy for passenger transportation. Since 1992, ARB has worked to ensure the use of cleaner burning gasoline to improve air quality throughout the state. One of the many components of the most recent gasoline reformulation program, CaRFG3, was the removal of the oxygenate MTBE due to concerns with groundwater contamination. However, the substitute oxygenate, ethanol, has resulted in greatly increased evaporative emissions due to fuel system permeation.

This proposed measure would make modifications to the CaRFG3 program to eliminate or offset all ethanol permeation effects. The effects on ROG emissions from all gasoline-fueled on-road vehicles have been estimated to be a 3 percent increase in the South Coast and a 6 percent increase in the San Joaquin Valley. The effects are greater in the San Joaquin Valley due to much higher overall temperatures that affect permeation.

ARB is scheduled to consider modifications to the CaRFG3 program in 2007.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	245	138	109	97
	Potential reductions		**4.4**	**3.0**	**2.5**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	77	48	36	34
	Potential reductions		**2.9**	**1.6**	**1.3**

Baseline emissions are the emissions from all gasoline-fueled on-road vehicles. The estimated reductions are equal to the incremental ROG emissions resulting from ethanol permeation which will be offset by this measure.

Timing

Action: 2007
Expected Implementation: Phase in starting 2010

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2007. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014,

2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Cleaner In-Use Heavy-Duty Trucks

Federal and State engine standards will ensure that by 2010 all new diesel heavy-duty trucks are 90 percent cleaner than new 2006 trucks. This tremendous progress is on top of a 65 percent reduction in NOx and an 85 percent reduction in particulate matter since 1990. Since trucks last a long time, we must bring newer trucks into the fleet at a faster pace, clean up older dirtier trucks, and keep the clean trucks clean longer to help meet air quality goals.

Between now and 2014 existing programs reduce heavy duty truck emissions by 50 percent. This proposed measure would reduce 2014 emissions another 30 percent. The measure would accomplish these new reductions through a program to reduce emissions from the legacy fleet involving accelerating the turnover to new truck engines and retrofitting the remaining trucks with emission reduction devices, and through an excess emissions program.

Legacy Fleet Emission Reduction Program

Newer heavy-duty trucks are typically used in long-haul service. After seven or eight years, they are often sold and their service is typically shifted to shorter-haul work. These trucks may remain in service within a given region for another twenty years or more.

An in-use truck program would focus on overcoming the slower rate of heavy-duty truck turnover to cleaner engines and retrofitting the remaining trucks with emission control devices such as particulate matter filters. The most comprehensive way to accomplish this would be through an “in-use” fleet rule that would require truck owners to meet specified emission levels. The proposed measure would address fleets operating in California regardless whether they are registered out of state. The emission reduction impact of the proposed in-use fleet program would be equivalent to replacing by 2014 approximately 30 percent of the oldest trucks with 2010 models year or newer trucks. The proposed measure would generate additional emission reductions beyond 2014, achieving reductions needed to meet the ozone air quality standard.

ARB staff has recently begun informational workshops on a heavy-duty truck in-use fleet rule, and has started to identify and explore the many emissions inventory, technology, financial, and logistical issues involved in crafting the most effective rule possible. ARB staff will be studying and requesting feedback from stakeholders on many issues, including: the characteristics of trucks registered outside of California; cost implications, especially to truck owner-operators, and ways to avoid any competitive disadvantage for various categories of truck owners; and the most efficient use of limited public incentive funds to achieve maximum emission benefits and lessen financial burden on truck owners.

Excess Emissions Program

An estimate of deterioration of emission controls has historically been built into ARB's projections of future emissions. As new engine technologies are introduced over the next few years, we need to ensure that the complex engine electronics and control devices used to make trucks so much cleaner are not more prone to failure, tampering or malmaintenance, and that deterioration does not reduce the benefits of the new standards. As the 2010 new engine standards are implemented, we will evaluate the in-use emissions and develop approaches to reduce excess emissions from trucks.

Under an existing program, heavy-duty trucks are inspected at random roadside locations for excessive smoke, and are inspected for tampered emission control systems. Owners of vehicles that do not pass these inspections are issued citations that require prompt repairs and carry civil penalties. This measure could include an expansion of this program.

While the design and evaluation of the specific program features has yet to be determined, ARB staff estimates that this concept has the potential to reduce NOx deterioration emissions by approximately 50 percent.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	16	10	7	6
	Potential reductions		**5.1**	**2.6**	**1.7**
NOx	Baseline emissions	238	131	79	65
	Potential reductions		**47.3**	**26.9**	**18.3**
PM2.5	Baseline emissions	10.2	5.3	3.3	2.8
	Potential reductions		**3.0**	**1.5**	**1.0**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	20	13	9	8
	Potential reductions		**6.4**	**3.3**	**2.3**
NOx	Baseline emissions	277	150	88	72
	Potential reductions		**61.4**	**30.2**	**21.2**
PM2.5	Baseline emissions	11.4	5.5	3.2	2.6
	Potential reductions		**3.6**	**1.6**	**1.2**

Baseline emissions represent emissions from diesel-fueled medium- and heavy heavy-duty trucks. (Note: Baseline emissions reflect adjustments not included in the SIP Emission Inventory Projections on ARB's website. The adjustments

include sleeper truck idling restrictions, diesel engine software upgrade, and emission reductions from the Carl Moyer Program.)

Timing

Action: 2008
Expected Implementation: 2010-2015

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2008. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Ships

Auxiliary Engine Cold Ironing and Other Clean Technology
Cleaner Main Engines and Fuel

Ships bring the majority of internationally traded goods to California. Due to the international nature of goods movement, marine vessels are subject to international and national standards set by the International Maritime Organization and U.S. EPA. However, ships are historically a largely unregulated sector. In 2006, ship emissions ranked as the largest contributor to SOx emissions, fifth largest contributor to NOx emissions, and seventh largest contributor to directly emitted PM2.5 in the South Coast. With the predicted growth in goods movement through California by 2020 (especially through the Ports of Los Angeles and Long Beach), emissions from ships are expected to increase significantly.

In April 2006, ARB adopted the Emission Reduction Plan for Ports and Goods Movement in California, which calls for aggressive measures for ships and other port-related sources. The proposed emission reduction targets in these measures are the same goals set in that plan. Even before the adoption of the plan, work had begun to help meet its goals. In December 2005, ARB approved an Auxiliary Engine Fuel Rule that will phase in cleaner low-sulfur fuel from 2007 to 2010. This rule will reduce SOx emissions from auxiliary engines by 96 percent, PM emissions by 83 percent, and NOx emissions by 6 percent beginning in 2010.

The proposed measures outlined below will continue to work toward the goals outlined in the goods movement plan to considerably reduce ship emissions. Marine fuel standards, cold ironing (port electrification), vessel speed reduction, and retrofitted diesel engines will ensure cleaner air around ports and reduced regional emissions. These measures are split by the type of engine used on a ship. Typically, ships use auxiliary engines while they are docked at the port or to run lights and other amenities while they are transiting. Main engines and boilers are used when ships are maneuvering within port waters or transiting throughout open waters.

Auxiliary Engine Measures

In addition to the Auxiliary Engine Fuel Rule, a new proposed measure for reducing auxiliary engine emissions is at-dock modifications including cold ironing and other advanced pollution reduction systems such as the “hood”. Cold ironing allows ships to turn off their auxiliary engines and instead plug into an electrical system for power when they are docked at the port. This is extremely beneficial to surrounding communities as it reduces exposure to multiple pollutants. The “hood” is a device that fits onto a ship’s exhaust stack and cleans the emissions. This measure would phase in the number of ships that will be capable of using cold ironing and technologies such as the “hood”. A combination of cold ironing and other at-dock technologies would reduce SOx

emissions by 54 percent in 2014 and 72 percent in 2023 and both NOx and PM emissions by 65 percent in 2014 and 82 percent in 2023.

Main Engine and Boilers

A Main Engine Fuel Rule, patterned after the Auxiliary Engine Fuel Rule, would help reduce emissions by introducing a cleaner, low-sulfur fuel beginning no later than 2010. This proposed rule would apply to ships using their main engine while maneuvering and transiting near the California coast and would reduce SOx emissions by 96 percent, PM emissions by 83 percent, and NOx emissions by 6 percent no later than 2010.

A highly effective measure to reduce main engine emissions would be to increase the use of cleaner new engines or retrofitted engines. The measure could be implemented via regulation, incentives, voluntary agreements, or a combination of these approaches. By 2014, ships visiting California ports would have either new engines or a mix of retrofit technology (e.g., technology similar to a catalytic converter on a passenger car) that would achieve an overall reduction of NOx and PM of 30 percent. In 2023, ships visiting California would be equipped with an even cleaner technology mix, resulting in a 70 percent reduction of NOx, 50 percent reduction of PM, and 40 percent reduction of SOx.

Vessel Speed Reduction (VSR) is an additional measure that would reduce main engine ship emissions. Presently, ships entering the Ports of Los Angeles and Long Beach have voluntarily agreed to reduce their speed to 12 knots within 24 nautical miles of the ports. It is estimated that there is a 48 percent compliance rate associated with this voluntary measure. In order to further reduce main engine emissions, ARB would require ships to reduce their speeds to 12 knots within 40 nautical miles of the Ports of Los Angeles and Long Beach. The efficacy of the VSR program in reducing emissions changes over time as the vessel speeds are a function of the vessel type. It is estimated that ships will get larger and, therefore, their speeds will change. VSR is 30-35 percent effective in reducing SOx emissions, 40-50 percent effective in reducing PM2.5 emissions, and 35-50 percent effective in reducing NOx emissions over time.

Estimated Emission Reductions
(tons per day ship emissions 0-100 nautical miles from the California coast)

South Coast (Auxiliary Engines)*

	(tons per day)	2006	2014	2020	2023
SOx	Baseline emissions	17.2	1.1	1.5	1.8
	Potential reductions	**0.0**	**0.4**	**0.7**	**0.7**
NOx	Baseline emissions	26.6	37.2	48.7	56.3
	Potential reductions	**0.0**	**18.5**	**28.3**	**30.8**
PM2.5	Baseline emissions	2.2	0.6	0.8	0.9
	Potential reductions	**0.0**	**0.3**	**0.4**	**0.5**

* ARB 2005 Auxiliary Engine Fuel Rule emission reductions are accounted for in the baseline.

South Coast (Main Engines and Boilers)

	(tons per day)	2006	2014	2020	2023
SOx	Baseline emissions	14.7	20.7	26.3	29.7
	Potential reductions	**0.0**	**19.7**	**25.4**	**28.8**
NOx	Baseline emissions	24.4	33.4	41.4	46.3
	Potential reductions	**0.0**	**20.0**	**32.3**	**39.9**
PM2.5	Baseline emissions	1.8	2.6	3.3	3.7
	Potential reductions	**0.0**	**2.4**	**3.1**	**3.6**

Since the control measures apply to the same source, the control percentages were applied sequentially to calculate total reductions.

Timing

Main Engine Fuel ATCM
Action: 2007
Expected Implementation: 2007-2010.

Cold Ironing
Action: 2007-2008
Expected Implementation: Starting in 2010 – 10 percent by 2010, 60 percent by 2014, and 80 percent by 2020.

Cleaner Engines (New and Retrofits)
Action: 2009
Expected Implementation: Phase-in starting in 2010.

Vessel Speed Reduction
Action: 2007
Expected Implementation: 2008.

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board beginning 2007. ARB staff will initiate a rule development process designed to achieve the

reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Port Truck Modernization

Trucks serving California ports are a vital part of the goods movement system. Trucks transfer incoming cargo containers from the ports to intermodal distribution centers for transport via long-haul rail or truck to their ultimate destination in California or throughout the U.S. Trucks also carry agricultural products from the Central Valley and other farming regions, and exports, to the ports for shipment overseas. Port-related truck activity is growing. The number of containers carried by truck to and from the Ports of Los Angeles and Long Beach, for example, is expected to grow by a factor of 2.5 within twenty years. Because trucks in port service tend to be older and dirtier than the truck fleet as a whole, it is important that the impact of these vehicles be mitigated more quickly to address community health issues and to meet air quality goals.

This proposed measure would reduce NOx and diesel PM2.5 emissions from the existing port truck fleet, as well as additional trucks entering port service. The basis for this strategy closely follows the goals outlined in the Emission Reduction Plan for Ports and Goods Movement in California (April 2006). Rulemaking is currently in progress for the port truck modernization rule, which would take place in two phases. The Ports of Los Angeles and Long Beach are also developing approaches to reduce port truck emissions on a parallel track. A mix of regulatory and other actions may be used to achieve the emission reduction target.

With the current ARB concept, trucks in regular port service that are model year 1993 and older would be replaced with 1998 and newer trucks by 2011. In addition, all trucks in regular port service would be retrofitted with verified devices that reduce diesel PM by 85 percent or more. Retrofits that also provide NOx reductions would be used to the greatest extent feasible. The second phase would require pre-2003 trucks in regular port service to meet or exceed 2010 federal engine standards by the end of 2017, and pre-2007 trucks in regular port service to meet or exceed 2010 federal engine standards by the end of 2019. Additionally, the proposal would require trucks entering port service for the first time between 2008 and 2011 to meet or exceed 2003 federal engine standards and be equipped with diesel particulate filters. Trucks entering port service between 2012 and 2014 would need to meet or exceed 2007 federal engine standards, and trucks entering port service in 2015 and later would need to meet or exceed 2010 federal engine standards.

This proposed measure would reduce port truck NOx emissions in the South Coast Air Basin by about 10 percent in 2014 and 50 percent in 2023. Also, diesel PM emissions from port trucks in the South Coast Air Basin would be reduced by more than 50 percent in 2014.

The reductions from this measure would complement the reductions achieved by the proposed cleaner in-use heavy-duty truck measure. The regulation currently being developed for port trucks would apply only to those heavy heavy-duty trucks in primary port service. The private fleet rule currently under development

would provide the reductions cited for the in-use heavy-duty truck measure by including trucks not in port service as well as trucks in the medium heavy-duty category.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
NOx	Baseline emissions	22	18	15	15
	Potential reductions		**2**	**8**	**7**
PM2.5	Baseline emissions	1.0	0.8	0.6	0.6
	Potential reductions		**0.5**	**0.3**	**0.3**

Baseline emissions are for port trucks, based on inventories developed for the Emission Reduction Plan for Ports and Goods Movement. Emission reduction estimates are based on the assumption that port trucks are older, on average, than the fleet as a whole (age distribution was based on a 2002 study by Starcrest International). The number of trucks in regular port service is projected to grow from approximately 12,000 in 2005 to 15,000 in 2010, 18,000 in 2015 and 21,000 in 2020. Staff assumed that port trucks make trips of lower average speed (35 mph), owing to short hauls to distribution centers and congested conditions near the ports.

Port truck emissions are small for the San Joaquin Valley so reductions for this measure are not significant. Goods movement-related emissions from trucks in the San Joaquin Valley are generated primarily by line-haul trucks and not port trucks. Line-haul truck emissions are significantly reduced in the proposed cleaner in-use heavy-duty truck measure.

Timing

Action: 2007-2008
Expected Implementation: 2008-2020

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2008. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast nonattainment area in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Accelerated Introduction of Cleaner Line-Haul Locomotives

Line-haul locomotives used to pull rail cars long distances account for about 95 percent of total train emissions. U.S. EPA proposed new Tier 4 standards to reduce NOx and PM emissions by 90 percent. These emission standards would build on existing federal requirements for using low sulfur diesel fuel. They include new engine standards and rebuild standards, and require aftertreatment technology. Since the useful life of a locomotive can exceed 30 years, the accelerated use of Tier 4 or equivalent technology is necessary to provide diesel PM and NOx reductions needed to meet attainment deadlines. ARB is pushing U.S. EPA to accelerate introduction of Tier 4 standards on an earlier timeframe, beginning in 2012.

The proposed measure calls for replacing existing locomotive engines with Tier 4 engines beginning in 2012 and conducting concurrent rebuilds of older engines to Tier 2.5 standards. This can only occur once U.S. EPA accelerates implementation of the Tier 4 engine standards for locomotives. It is estimated that by 2023, this measure would reduce NOx by 70 percent and direct PM2.5 by about 75 percent.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	2.3	2.3	2.4	2.5
	Potential reductions		**0.7**	**1.8**	**1.9**
NOx	Baseline emissions	26.7	18.3	21.0	22.6
	Potential reductions		**4.3**	**13.4**	**15.6**
PM	Baseline emissions	0.78	0.71	0.75	0.77
	Potential reductions		**0.20**	**0.56**	**0.59**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	1.6	1.5	1.6	1.6
	Potential reductions		**0.5**	**1.2**	**1.3**
NOx	Baseline emissions	21.5	19.9	20.6	21.1
	Potential reductions		**7.2**	**15.6**	**16.4**
PM	Baseline emissions	0.58	0.53	0.53	0.54
	Potential reductions		**0.18**	**0.42**	**0.46**

Baseline emissions represent line-haul and switcher locomotives.

Emission reduction estimates are based on, beginning in 2012, 10 percent of the existing engines being replaced by Tier 4 engines and 5 percent upgraded to Tier 2.5 standards until 100 percent of the statewide fleet has been upgraded.

Timing

Action: U.S. EPA adopts Tier 4 standards in 2007. Voluntary agreement to accelerate implementation – 2008.

Expected Implementation: Introduction of 10 percent Tier 4 and upgrades to Tier 2.5 at 5 percent are expected to begin 2012.

Staff Proposed SIP Commitment

ARB staff will continue to encourage U.S. EPA to accelerate implementation of the Tier 4 engine standards. Once the new standards are in place, ARB staff commits to work with the railroads to bring the cleanest locomotives in to California service.

Clean Up Existing Commercial Harbor Craft

Commercial harbor craft are marine vessels that operate primarily along California's coastline and inland waterways. They include tugboats, work boats, crew/supply boats, ferries, excursion boats, commercial and sport fishing boats, and other harbor vessels. The diesel propulsion and auxiliary engines used on these vessels were built for long life and have essentially uncontrolled emissions.

U.S. EPA adopted harbor craft engine standards that apply to new engines beginning in 2004. The engines meeting the new U.S. EPA standards have roughly 50 percent less NOx than uncontrolled engines. Since the useful life of harbor craft vessels is so long, the benefits of new engine standards accrue slowly over time. However, to accelerate emission reductions, many of these vessels can be repowered with newer, cleaner engines.

There are also emission control technologies, called "add-on" controls or retrofits, that can reduce both NOx and diesel particulate matter. Retrofit control technologies have been shown to dramatically reduce emissions when used with heavy-duty diesel engines in land-based operations and can be adapted to marine applications.

ARB is in the process of developing a regulation that would require owners of existing commercial harbor craft to replace old engines with newer cleaner engines and/or to add retrofit emission control technologies. It would address both propulsion and auxiliary engines. The regulation would take into account the fact that harbor craft vessel types are diverse and may require various combinations of emission reducing strategies and that some vessel configurations may not accommodate retrofits. Fishing boats in particular will be difficult to retrofit and may face difficult unique economic constraints.

The proposed regulation is one of the measures in ARB's Goods Movement Plan and is scheduled for adoption in 2007. ARB staff estimates that the harborcraft regulations will reduce NOx and PM emissions 30 percent by 2014, and 40 percent by 2020,based on the capabilities of existing control technologies.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
NOx	Baseline emissions	23.1	15.7	12.7	12.7
	Potential reductions		**4.6**	**5.1**	**5.9**
PM2.5	Baseline emissions	1.1	0.7	0.6	0.6
	Potential reductions		**0.2**	**0.2**	**0.3**

The baseline harbor craft inventory is taken from the Emission Reduction Plan for Ports and Goods Movement, April 2006. Direct PM2.5 numbers reflect diesel PM. Emission reduction estimates assume the regulation will reduce emissions 30 percent by 2014, and 40 percent by 2020. (Emission reductions were estimated for the San Joaquin Valley but found to be insignificant.)

Timing

Action: 2007
Expected Implementation: 2009-2018

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2007. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast nonattainment area in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Cleaner In-Use Off-Road Equipment

Adopted emission standards for new off-road diesel engines are becoming increasingly more stringent, ensuring that new construction, mining, industrial, oil drilling and airport ground support equipment become progressively cleaner. The cleanest standards for NOx emissions in these categories will phase in from 2013-2015. However, large diesel off-road equipment with more than 25 horsepower remain in use for long periods of time, often 25 years or more. This long life means that new, lower emitting engines are introduced into fleets relatively slowly with the result that the emission reductions and associated health benefits from these cleaner engines will also be slow to materialize. Accelerating the introduction of cleaner engines and emissions control technologies into the statewide fleet is necessary to meet air quality standards.

This proposed measure would require owners of equipment larger than 25 horsepower to meet a stringent average emissions level across all of their equipment. The fleet average approach provides equipment owners flexibility in how they will comply, including: swapping older, dirtier engines with newer, cleaner engines; purchasing newer equipment (with cleaner engines); and, adding emission control devices to older engines. It also allows fleet owners to maintain a fleet with some engines which are cleaner than the fleet average and others which are dirtier, so that, on average, the fleet meets the target. ARB staff is also proposing idling limits similar to those the Board has adopted for heavy duty trucks.

ARB staff has proposed a statewide in-use off-road diesel equipment regulation which could require initial NOx and PM emissions averages to be met, with increasingly lower emissions averages over time. Staff began work on the rule in 2004 as part of the Diesel Risk Reduction Program. During early SIP development work in 2006, staff identified the necessity for large NOx emission reductions from off-road equipment and other diesel sources to meet the health-based federal air quality standards. Consequently, staff revised the control concept extensively to meet California's clean air needs relative to diesel particulates, ozone, and PM2.5.

This measure would reduce NOx emissions from large diesel off-road equipment in the South Coast Air Basin by approximately 10 percent in 2014 and by about 30 percent in 2023.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline Emissions	20.2	13.3	9.3	8.1
	Potential Reductions		**2.7**	**2.9**	**1.9**
NOx	Baseline Emissions	143.2	96.1	59.0	46.5
	Potential Reductions		**10.5**	**18.7**	**13.9**
PM2.5	Baseline Emissions	8.1	4.9	2.6	1.8
	Potential Reductions		**2.6**	**1.8**	**1.3**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline Emissions	6.1	4.2	3.1	2.7
	Potential Reductions		**0.9**	**1.0**	**0.6**
NOx	Baseline Emissions	47.6	32.8	21.6	17.7
	Potential Reductions		**3.7**	**7.0**	**5.4**
PM2.5	Baseline Emissions	2.3	1.5	0.8	0.6
	Potential Reductions		**0.8**	**0.6**	**0.4**

Baseline emissions are from the OffRoad2007 model.

Emission reduction estimates are based on expected emission reductions from ARB's proposed In-Use Off-Road Diesel Vehicle rule currently under development. Because the proposed rule is under development, the estimated reductions are subject to change.

The rule proposal applies declining fleet averages for large fleets beginning in 2010. For NOx, the fleet averages for 2014 for most engine sizes are more stringent than Tier 1 emission levels. The corresponding PM fleet averages for 2014 are cleaner than Tier 2 emission levels. In 2020, fleet averages for NOx and PM are more stringent than Tier 3 emission levels. The means to reach these fleet averages are left to the equipment owners to decide. However, if a fleet cannot meet the NOx averages, it must turnover 8 percent of its total horsepower per year to cleaner engines (minimum Tier 2 engine) in the initial years and 10 percent per year in years after 2015. A fleet must retrofit 20 percent of its total horsepower with diesel particulate filters if it cannot meet the PM average. The rule would also restrict unnecessary idling.

Timing

Action: 2007
Expected Implementation: Phase-in starting 2008

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2007. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Cleaner In-Use Agricultural Equipment

New engines used in agricultural operations must meet the same standards as other off-road engines, ensuring that new equipment become progressively cleaner. Just as in other off-road applications, diesel agricultural equipment can remain in use for long periods of time. This long life means that new, lower emitting engines are introduced into fleets relatively slowly with a direct impact on the pace that emission reductions materialize.

The cleanup of agricultural in-use equipment is primarily an issue in the San Joaquin Valley with its large agricultural economy. Natural turnover of the agricultural fleet will reduce emission significantly by the Valley's expected 2024 ozone attainment deadline. Modeling for the Valley's PM2.5 SIP due in 2008 will show what accelerated fleet modernization may be needed. Once that information is available, ARB staff will quantify reductions from this measure. ARB staff is also supporting efforts to obtain additional incentive funding to accelerate progress.

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline Emissions	13	7	4	3
	Potential Reductions		NYQ	NYQ	NYQ
NOx	Baseline Emissions	62	38	23	18
	Potential Reductions		NYQ	NYQ	NYQ
PM2.5	Baseline Emissions	3.5	2.0	1.1	0.7
	Potential Reductions		NYQ	NYQ	NYQ

Timing

Action: 2009-2010
Expected Implementation: To Be Determined

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2010. ARB staff will initiate a rule development process designed to achieve emission reductions for the San Joaquin Valley nonattainment area in 2014, 2020, and 2023. The estimated emission reductions have yet to be quantified.

New Emission Standards for Recreational Boats

Recreational boat engines are broadly divided into two categories: outboard boats/personal water craft (PWC) and inboard/sterndrive. Outboard and PWC motors until recently were predominantly 2-stroke engines. Inboard/sterndrive engines are typically automotive spark-ignition engines adapted for boats that must now comply with a 5.0 g/kW-hr exhaust standard by 2009, which can be achieved with three-way catalytic converters and oxygen sensor feedback controls. Although ARB previously adopted exhaust emission standards for outboard/PWC engines, lower exhaust standards to further reduce emissions are possible by adapting the emission control technology used for inboard/sterndrive engines. This measure calls for the implementation of a tighter, catalyst-based exhaust standard of 5.0 g/kW-hr for outboard/PWC engines to be phased-in by 2013. Only 4-stroke engines are expected to be able to comply with this tighter standard.

Evaporative emissions represent about one fourth of the total ROG emissions from recreational boat engines. There are no state or federal evaporative emission standards for any type of recreational boats. This measure calls for an evaporative emission standard that will address all sources of boat evaporative emissions (tank, carbon canisters, fuel lines, etc.). The technology needed to achieve evaporative standards for boats is readily adaptable from that used in automobiles and small off-road equipment.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline Emissions	64.1	52.8	50.3	50.8
	Potential Reductions	0.0	**4.2**	**12.8**	**17.6**
NOx	Baseline Emissions	16.1	17.1	18.0	18.3
	Potential Reductions	0.0	**0.4**	**1.6**	**2.4**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline Emissions	20.1	17.1	16.6	16.8
	Potential Reductions	0.0	**1.3**	**3.8**	**5.3**
NOx	Baseline Emissions	5.3	5.6	5.7	5.8
	Potential Reductions	0.0	**0.1**	**0.4**	**0.6**

The baseline estimates are comprised of summer average exhaust and evaporative emissions for all types of recreational boats.

Exhaust emission reduction estimates for outboard and PWC are based on the percent reduction estimates from ARB's 2001 regulation for inboard/sterndrive

engines, which reduced the exhaust standards by the same increment (from 16 to 5 g/kW-hr).

Evaporative emission reductions are based on an estimated 70 percent control of evaporative emissions for all recreational boats of model year 2012 and newer. The 70 percent control is a composite that accounts for the cumulative reductions from all sources of boat evaporative emissions (tank, carbon canisters, fuel lines, etc.).

Timing

Action: Exhaust standard by 2010; evaporative standard by 2009.
Expected Implementation: Exhaust standard by 2013; evaporative standard by 2012.

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2010. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Off-Road Recreational Vehicle Expanded Emission Standards

Exhaust Standards

Exhaust emissions from off-road recreational vehicles are controlled to a much lesser extent than on-road motorcycles or on-road cars and trucks with the result that this category of vehicles is showing an increase in emissions into the future.

In 1994, ARB approved exhaust emission standards and test procedures for off-road recreational vehicles, including off-highway motorcycles and all terrain vehicles (ATVs). In 1998, ARB revised the rules to allow non-compliant vehicles to be sold and operated outside the summer season or in locations where ozone levels are lower.

Off-road recreational vehicles lag in emission reductions for a number of reasons including technical limitations, cost, and tampering. Another concern is that the California market is not large enough for off-road recreational vehicle manufacturers to produce vehicles that would comply with more stringent California exhaust standards. This could lead to compliance problems if consumers either purchase off-road recreational vehicles out-of-state or falsely certify that the vehicles they purchase are intended for use in competition. The most effective strategy would be for U.S. EPA to establish tighter exhaust standards for all off-road recreational vehicles, thereby precluding the potential for California consumers to purchase and operate non-complying (and higher emitting) vehicles.

This measure calls for reducing exhaust emissions by 50 percent from new off-highway motorcycles and ATVs beginning in 2012 using proven automotive and on-road motorcycle exhaust emission reduction technologies. Due to the high fleet turnover and overall growth of the fleet, ARB staff estimates that the measure would reduce ROG exhaust emissions from off-road recreational vehicles 25 percent by 2014 and 50 percent by 2023.

Evaporative Standards

In 2002, U.S. EPA approved a rule that required all off-road recreational vehicles to comply with evaporative standards beginning with 2008 vehicles. However, the standards only control permeation from the fuel tank and hoses. In July 2006, ARB approved evaporative emission standards that harmonized with existing U.S. EPA regulations.

This measure would reduce ROG evaporative emissions by 50 percent from off-highway motorcycles and ATVs beginning in 2012 using proven automotive and on-road motorcycle evaporative emission reduction technologies. Due to the high fleet turnover and overall growth of the fleet, ARB staff estimates that the measure would reduce ROG evaporative emissions from off-road recreational vehicles 25 percent by 2014 and 50 percent by 2023.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	8	9	11	13
	Potential reductions		**2.4**	**5.1**	**6.4**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	7	9	11	12
	Potential reductions		**2.2**	**4.9**	**6.1**

Baseline ROG emissions (exhaust + evaporative) are for all off-road motorcycle and ATVs in each region. Emission reduction estimates are from ARB's off-road motor vehicle emissions model programmed to calculate the potential impact of reducing new engine exhaust and evaporative emissions by 50 percent beginning in 2012.

Timing

Action: By 2010
Expected Implementation: 2012-2015

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2010. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Additional Evaporative Emission Standards

Portable Outboard Marine Tank Evaporative Standards

Portable outboard marine tanks (OMT) are small-capacity tanks (usually less than 12 gallons) that supply fuel to marine outboard engines. Unlike larger vessels with permanently mounted fuel tanks, many small and medium size outboard boats use removable tanks to allow both the engine and fuel tank to be removed for transport or storage. OMTs are not subject to any emission standards and as a result have relatively high evaporative emissions. DMV and other data indicate that there were approximately 200,000 registered outboard vessel owners in California in 2005. If we assume one tank per outboard, the statewide inventory would be 200,000 OMTs with statewide emissions of approximately six tons per day. Baseline emissions for future years and regions of the state were scaled from this estimate on the basis of emission inventories of evaporative emissions from outboard boat engines smaller than 15 horsepower.

Diurnal and permeation standards for OMTs and associated equipment are expected to have the same emission reduction efficiencies as controls required by ARB's 2005 regulation for portable fuel containers, and would reduce emissions by 50 percent in 2014 and 75 percent in 2023. This measure would be applied to new tanks, resulting in a phase-in over the useful lives of existing tanks.

Refueling Gasoline Tank Evaporative Standards

Refueling gasoline tanks (from 30 to 100 gallons) are usually mounted on a vehicle and used to refuel other motor vehicles. Some examples include tanks on recreational vehicles, like toy haulers, for fueling off-highway recreational vehicles or tanks on pickup trucks for fueling off-road or agricultural equipment. There are an estimated 150,000 refueling tanks in California

ARB staff are currently conducting surveys to determine accurate populations as well as testing to calculate more accurate emissions. Rough preliminary statewide estimates of evaporative emissions from refueling gasoline tanks are approximately six tons per day. Future year and regional baseline estimates are scaled from this statewide estimate on the basis of recreational offroad vehicle evaporative emissions.

Setting evaporative standards for refueling tanks would reduce ROG emissions by 60-70 percent, depending on which technology is utilized. Control technologies being considered include passive purge carbon canisters and insulation. These technologies would be applied to new tanks and would be phased-in over the useful lives of existing tanks.

Gas Station Refueling Hose Evaporative Standards

Gas station refueling hoses are co-axial hoses that transfer fuel from the filling station pump to a vehicle's fuel tank and return displaced gasoline vapors from the vehicle fuel tank to the gasoline storage tank. Evaporative emissions occur through the hose material. There are an estimated 120,000 gas station refueling hoses statewide with estimated emissions of three tons per day.

Setting evaporative standards for gas station refueling hoses would reduce ROG emissions by 70-98 percent, depending on which technology is utilized. These estimates are based on previous standards for low permeation vehicle fuel hose and initial ARB and industry testing results.

Estimated Emission Reductions

Emission inventories are being reassessed for these evaporative source categories. For SIP purposes, emission reductions are not quantified for these measures so no benefits are included in the proposed SIP.

The measures are described here for informational purposes only. Reductions from these measures will be accounted for in future SIP updates. For information purposes only, reductions from the three measures combined are expected to be about 3 tons per day in the South Coast in 2020.

Enhanced Vapor Recovery for Above Ground Storage Tanks

Above ground storage tanks are large gasoline storage tanks used extensively in agricultural operations. Typical tanks have capacities ranging from 250 to 12,000 gallons. Above ground storage tanks are becoming increasingly popular due to their superior leak detection capabilities. Because these tanks are exposed to ambient air temperatures, emissions are greater than from underground tanks. Annual statewide ROG emissions from all tanks in 2004 totaled 3.1 tons per day. Emission reductions are possible and feasible with an enhanced vapor recovery certification process and new performance standards and specifications.

This proposed measure calls for reducing emissions by 90 percent from new above ground storage tanks, by 76 percent from retrofitting existing non-agricultural tanks, and by 60 percent from retrofitting existing agricultural tanks. This measure would be implemented beginning in 2007, and by 2011 would reduce statewide ROG emissions from tanks by two tons per day. The estimated control efficiencies are based on field testing of proposed controls. The retrofitting of existing tanks would be phased in between 2007 and 2011 with 25 percent of tanks being converted each year. ARB staff is currently analyzing what the emission reductions would be for each region.

Estimated Emission Reductions

Statewide

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	3.2	3.5	3.8	3.9
	Potential reductions	--	**2.3**	**2.4**	**2.5**

The statewide emissions for above ground storage tanks have not been apportioned by region, and therefore are not included in the baseline inventory. Since the emissions are not in the inventory, the potential reductions listed here are not included as an emission reduction commitment in the proposed State Strategy.

Timing

Action: 2007
Implementation: Phase-in starting 2008

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2007. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014,

2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Consumer Products Program

Chemically formulated consumer products such as automotive care products, household care products, and personal care products have been regulated as a source of ROG emissions in five rulemakings since 1989. As a result of these measures, statewide emissions from consumer products in 2010 will be reduced 40 percent from uncontrolled levels. Despite this progress, population growth in the years ahead is expected to reverse the downward trend of emissions from consumer products as early as 2008, after the latest standards become effective. The magnitude of emissions from this sector indicates that additional controls for this sector remain important, even though the average photochemical reactivity of the ROG emissions from the consumer product sector is approximately one-third that of motor vehicle exhaust. Consumer products are expected to become the largest source of ROG emissions in the South Coast Air Basin, and the third largest source in the San Joaquin Valley Air Basin by 2020**.**

This proposed measure would continue ARB's commitment to reduce ROG emissions from consumer products. The current program uses industry surveys to gather information about sales trends and product formulations. Staff uses survey data along with trade journals, patents, and other technical information to propose mass-based ROG limits. Staff will continue to investigate any and all opportunities for emission reductions from mass-based limits by taking advantage of emerging low-emitting technologies. However, the ability to achieve significant reduction from mass-based standards is waning, so staff will likely be shifting the focus to other potential emission reduction opportunities. One such measure would include investigating emission reduction opportunities through reactivity-based standards in most categories. A reactivity-based approach relies on the scientific principle that different chemical compounds form different amounts of ozone in the atmosphere, rather than the mass-based approach that reduces ozone formation by reducing all reactive organic gases.

In the future, it is likely that further emission reductions from the consumer products source category will not be feasible using conventional approaches. Staff will work with stakeholders to explore alternative market-based mechanisms that would encourage the development, distribution, and purchase of cleaner, very low, or zero emitting products. Examples of mechanisms to explore are a multi-media labeling program, programs where companies set their own emissions reduction goals, and the use of the media for public education. If these mechanisms cannot produce meaningful emission reductions from the consumer products source category, then other approaches would be evaluated. Examples of alternative approaches are the purchase of ROG credits and the funding of special projects to reduce emissions or accelerate reductions from pollution sources outside of the consumer products industry.

The above approaches could be implemented through several rulemakings and would achieve approximately 30-40 tons per day ROG reductions statewide, equivalent to 13-17 tons per day in the South Coast, in the 2008 to 2014 timeframe. The 2006 measure was adopted by the ARB Board in

November 2006 with phase-in implementation from 2008 to 2010.

Estimated Emission Reductions

South Coast

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	103	103	107	110
	Potential reductions	--	**12.9**	**13.5**	**13.7**

San Joaquin Valley

	(tons per day)	2006	2014	2020	2023
ROG	Baseline emissions	24	26	28	30
	Potential reductions	--	**3.2**	**3.6**	**3.8**

Timing

Consumer Products Regulations

Action: 2007-2008
Expected Implementation: By 2010

Action: Between 2010 and 2012
Expected Implementation: By 2012-2014

Staff Proposed SIP Commitment

ARB staff proposes to commit to bring this measure to the Board by 2008. ARB staff will initiate a rule development process designed to achieve the reductions shown for the South Coast and San Joaquin Valley nonattainment areas in 2014, 2020, and 2023. The measure as proposed by staff to the Board or adopted by the Board may provide more or less than the amount shown.

Department of Pesticide Regulation's Proposed SIP Commitment

The Department of Pesticide Regulation's (DPR) proposed 2008 Pesticide Plan includes strategies to reduce ROG emission from pesticides through regulation of fumigant pesticide use, regulatory standards for registration of liquid pesticides, and strategic partnership agreements implementing pest management practices and technologies that use less pesticide product. This DPR Plan goes beyond reducing ozone precursor emissions by also addressing air toxic exposures associated with pesticide use. This proposed SIP commitment reflects only near-term actions. Future DPR actions will be included in SIP updates after DPR takes regulatory action.

Near-term Measures - Fumigant Regulations

DPR would implement regulations in 2008 that set a limit on the aggregate ROGs that may be emitted from field fumigation during the ozone season in the certain areas. In addition, the 2008 regulations would specify the allowable application methods that may be used in field fumigation statewide. Certain high-emission application methods would be excluded from that list. In 2008, emission reductions of 2.5 tons per day (tpd) would be achieved in the San Joaquin Valley.

The commitment for near-term emission reductions from the 2008 regulations would implement the commitment for pesticide emission reductions detailed in the 1994 SIP in the San Joaquin Valley.

Estimated Emission Reductions

San Joaquin Valley

	(tons per day)	2006	2008	2014	2020	2023
ROG	Baseline emissions	17.9	17.9	17.9	17.9	17.9
	Potential reductions	**--**	**2.5**	**2.5**	**2.5**	**2.5**

Timing

Action: 2008
Expected Implementation: By 2008

Staff Proposed SIP Commitment

DPR staff proposes to promulgate a regulation for implementation by 2008 to achieve ROG emission reductions in the San Joaquin Valley in 2008 of 2.5 tpd, based on an inventory of 17.9 tpd.

Appendix A

Emissions Inventory Output Tables

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Emissions Inventory Output Tables

Appendix A includes the emissions inventory output tables for all nonattainment areas for the 2007 SIP. The inventories shown are the baseline summer season planning inventories on which the State Strategy is based.

For each precursor pollutant, the inventory tables provide emissions for stationary, areawide, and mobile sources broken down by source subcategory.

The summer planning inventories reflect adjustments for regulations adopted through 2006 and minor technical improvements not yet included in the California Emissions Forecasting System (CEFS) inventories on the ARB web site (and described in Appendix F). These adjustments are specified in a separate table for each precursor pollutant in each nonattainment area. The adjustment categories are summarized below. ARB web site addresses are also listed for further information on related rulemakings.

Baseline Adjustments – Category Descriptions

Public Fleet:
Rule to reduce diesel truck emissions in government and private utility fleets (adopted December 2005).
For more information: http://www.arb.ca.gov/msprog/publicfleets/publicfleets.htm.

Idling:
Rule to limit general truck idling to five minutes (adopted July 2004) and rule to limit sleeper cab trucks to five minutes of idling or use of an auxiliary power unit (adopted October 2005).
For more information:
http://www.arb.ca.gov/toxics/idling/idling.htm
http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm.

AB 1493:
Criteria pollutant benefits from greenhouse gas limits for motor vehicles (adopted September 2004).
For more information: http://www.arb.ca.gov/cc/ccms/ccms.htm

Moyer:
Emission reductions from the Carl Moyer Memorial Air Quality Standards Attainment Program ($81 million in incentive funds from 2007 through 2015). The Carl Moyer Program provides incentive grants for cleaner-than-required

engines, equipment and other sources of pollution providing early or extra emission reductions.
For more information: http://www.arb.ca.gov/msprog/moyer/moyer.htm.

HHDD Trucks:
Estimates for heavy-heavy-duty truck (HHDT) vehicles miles traveled for year 2005 were adjusted to match transportation agency estimates. (Further explanation below.)

Reflash:
Diesel engine software rule (adopted March 2004) and related actions to reduce heavy-duty truck NOx emissions. (Further explanation below.)
For more information: http://www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm

Off-road:
- Rule to reduce emissions from new truck refrigeration units (adopted February 2004).
  For more information: http://www.arb.ca.gov/diesel/tru.htm.
- Rule to reduce emissions from new portable construction, mining, and industrial equipment (adopted February 2004).
  For more information: http://www.arb.ca.gov/diesel/statport.htm
- Rule to reduce emissions from forklifts, generators, and pumps (adopted May 2006).
  For more information: http://www.arb.ca.gov/msprog/offroad/orspark/orspark.htm

Ships:
Rule to require ships to use cleaner low-sulfur fuel to power auxiliary engines within 24 nautical miles of the California coast (adopted December 2005).
For more information:
http://www.arb.ca.gov/msprog/offroad/marinevess/marinevess.htm

Consumer Products:
Most recent regulatory action to reduce ROG emissions from consumer products (adopted November 2006).
For more information: http://www.arb.ca.gov/consprod/consprod.htm

Pesticides/Fertilizers:
Updated pesticide emissions inventory data provided by the Department of Pesticide Regulation. (Further explanation below.)

San Joaquin Valley Inventory Adjustments:
As part of the San Joaquin Valley 2007 Ozone Plan development, the San Joaquin Valley air district made several adjustments to the emission inventories. (Further explanation below.)

Further Baseline Adjustment Explanations

HHDD Trucks. Adjustment for 2005 Heavy-Duty Truck VMT

ARB's on-road motor vehicle emissions model (EMFAC2007) estimates for heavy heavy-duty truck vehicle miles traveled (VMT) for year 2005 were adjusted to match transportation agency VMT estimates.

To calculate VMT for years 2000 through 2005, ARB staff used population data from the Department of Motor Vehicles (DMV) together with mileage accrual rates from the Bureau of Automotive Repair. As result, default EMFAC2007 VMT for 2000 through 2005 can differ from transportation agency estimates, which are transportation model outputs. This was the case for the 2005 heavy heavy-duty VMT estimate. For SIP purposes, State law directs ARB to use transportation agency VMT data when it is available. Ozone and PM2.5 air quality modeling was done for 2005, making it a critical year for the SIP. Therefore, ARB staff applied an external factor to heavy heavy-duty truck emissions for 2005 that matched EMFAC2007 VMT to transportation planning agency VMT.

Reflash. Heavy-Duty Diesel engine Software Upgrade

ARB staff estimates that overall benefits of the software upgrade regulation plus related actions provided approximately 38 tons per day of NOx emission reductions statewide in 2007. This is within the range of the original staff estimate of 30 to 40 tons per day. Reductions included in the adjustment beyond those required by the now invalidated regulation come from voluntary upgrade programs, ongoing engine rebuilds, engines upgrades by manufacturers exempt from the regulation, and interstate trucks.

Pesticides/Fertilizers. Pesticide ROG Inventory Adjustments

The California Department of Pesticide Regulation (DPR) is the lead agency for tracking pesticide usage. DPR provided two sets of pesticide emissions inventory updates for ozone nonattainment areas. These data are in the attached tables.

- In October 2006, DPR provided pesticide emissions based on the latest pesticide use (2004 Pesticide Use Report) data.

- Subsequently, DPR provided updated pesticide emissions estimates for five areas based on a review of recently published literature, including monitoring studies demonstrating lower emissions when fumigant applications are tarped, irrigated after application, or applied through drip irrigation systems. The five areas are:
    - Sacramento
    - San Joaquin Valley
    - Southeast Desert (Antelope Valley, Western Mojave Desert, and Coachella Valley 8-hour nonattainment areas)

- Ventura
- South Coast

San Joaquin Valley Air Pollution Control District Emissions Inventory Adjustments

As part of the San Joaquin Valley 2007 Ozone Plan development, the San Joaquin Valley Air Pollution Control District (SJVAPCD) made several adjustments to the emission inventories. The inventory adjustments include two types of refinements:

- To account for recent district rulemaking activities, such as District rule 4570 – Confined Animal Facilities.
- To provide an initial accounting of previously un-inventoried source categories, such as emissions from green waste composting and biosolid management.

These adjustments are described in greater detail in Appendix B of the San Joaquin Valley 2007 Ozone Plan, as adopted by the SJVAPCD Governing Board on April 30, 2007.

Antelope Valley

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NOX - Antelope Valley - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
MANUFACTURING AND INDUSTRIAL	1.13	1.18	1.20	1.22	1.23	1.24	1.26	1.28	1.30	1.32	1.35	1.38	1.39	1.43	1.47
SERVICE AND COMMERCIAL	0.37	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41
OTHER (FUEL COMBUSTION)	0.20	0.20	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.16
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.13	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.18	0.18	0.19	0.20
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.19	0.20	0.19	0.20	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.24	0.24	0.25	0.25
Stationary Subtotal	**2.03**	**2.11**	**2.12**	**2.14**	**2.16**	**2.16**	**2.19**	**2.22**	**2.25**	**2.28**	**2.31**	**2.35**	**2.37**	**2.42**	**2.49**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.26
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.16	0.16	0.16	0.17
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.37**	**0.38**	**0.38**	**0.38**	**0.39**	**0.39**	**0.39**	**0.40**	**0.40**	**0.40**	**0.41**	**0.41**	**0.42**	**0.42**	**0.43**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	2.64	1.95	1.74	1.46	1.36	1.26	1.14	1.03	0.93	0.85	0.78	0.65	0.60	0.52	0.43
LIGHT DUTY TRUCKS - 1 (LDT1)	0.78	0.64	0.57	0.47	0.43	0.40	0.36	0.33	0.30	0.28	0.25	0.21	0.19	0.16	0.13
LIGHT DUTY TRUCKS - 2 (LDT2)	1.95	1.64	1.47	1.25	1.18	1.11	1.04	0.97	0.91	0.85	0.80	0.70	0.66	0.59	0.50
MEDIUM DUTY TRUCKS (MDV)	1.22	1.09	0.98	0.82	0.78	0.74	0.70	0.66	0.62	0.58	0.55	0.49	0.45	0.40	0.33
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.81	0.71	0.53	0.38	0.36	0.35	0.34	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.07	0.08	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.10	0.10	0.08	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.13	0.16	0.13	0.09	0.09	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.04	0.04	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.55	0.42	0.28	0.27	0.25	0.22	0.21	0.20	0.19	0.19	0.17	0.16	0.15	0.13
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.24	0.41	0.31	0.21	0.20	0.18	0.17	0.16	0.15	0.14	0.14	0.12	0.11	0.10	0.08
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.72	1.05	0.81	0.58	0.55	0.51	0.46	0.43	0.39	0.37	0.35	0.29	0.27	0.23	0.19
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	6.37	6.85	6.87	4.99	4.73	4.35	3.95	3.58	3.24	3.00	2.75	2.27	2.06	1.71	1.36
MOTORCYCLES (MCY)	0.07	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.17	0.18
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
SCHOOL BUSES (SB)	0.21	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.19
OTHER BUSES (OB)	0.06	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05	0.04
MOTOR HOMES (MH)	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.12	0.12	0.11	0.10	0.09	0.08	0.07	0.06
On-Road Subtotal	**15.62**	**15.91**	**14.64**	**11.32**	**10.72**	**9.97**	**9.20**	**8.50**	**7.85**	**7.35**	**6.87**	**5.92**	**5.51**	**4.83**	**4.10**
Other Mobile															
AIRCRAFT	0.60	0.66	0.68	0.72	0.74	0.76	0.79	0.82	0.86	0.88	0.91	0.97	0.99	1.05	1.13
TRAINS	2.34	1.95	1.84	1.78	1.78	1.33	1.36	1.39	1.42	1.45	1.49	1.56	1.60	1.68	1.81
RECREATIONAL BOATS	0.03	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
OFF-ROAD RECREATIONAL VEHICLES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
OFF-ROAD EQUIPMENT	12.18	11.55	11.18	10.40	10.01	9.62	9.12	8.65	8.20	7.69	7.21	6.32	5.92	5.23	4.44
FARM EQUIPMENT	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHIPS AND COMMERCIAL BOATS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**15.21**	**14.26**	**13.80**	**13.00**	**12.64**	**11.81**	**11.37**	**10.96**	**10.57**	**10.12**	**9.69**	**8.93**	**8.60**	**8.05**	**7.47**
Grand Total	**33.23**	**32.65**	**30.94**	**26.83**	**25.90**	**24.33**	**23.16**	**22.08**	**21.07**	**20.16**	**19.28**	**17.62**	**16.90**	**15.72**	**14.50**

NOX - Antelope Valley															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-2.03	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.02	-0.28	-0.31	-0.17	-0.15	-0.13	-0.12	-0.10	-0.09	-0.08	-0.07	-0.04	-0.03	-0.02	-0.01
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	-0.05	-0.12	-0.24	-0.25	-0.25	-0.26	-0.26	-0.27	-0.28	-0.29	-0.30	-0.30	-0.31	-0.31
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.04	-0.05	-0.04	-0.02	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	0.00	0.00
Off-road	0.00	0.00	-0.01	-0.02	-0.03	-0.07	-0.07	-0.07	-0.08	-0.07	-0.07	-0.07	-0.06	-0.06	-0.06
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.06**	**-2.41**	**-0.48**	**-0.45**	**-0.46**	**-0.49**	**-0.49**	**-0.48**	**-0.48**	**-0.47**	**-0.47**	**-0.44**	**-0.42**	**-0.39**	**-0.38**

* These are already included in "Adjusted Baseline" sheets

and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Antelope Valley - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
MANUFACTURING AND INDUSTRIAL	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09
SERVICE AND COMMERCIAL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
OTHER (FUEL COMBUSTION)	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LANDFILLS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (WASTE DISPOSAL)	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	2.28	2.34	2.36	2.38	2.41	2.44	2.46	2.49	2.51	2.54	2.56	2.60	2.62	2.67	2.73
COATINGS AND RELATED PROCESS SOLVENTS	0.80	0.82	0.81	0.86	0.88	0.91	0.93	0.96	0.98	1.00	1.03	1.07	1.09	1.12	1.18
ADHESIVES AND SEALANTS	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	2.58	2.75	2.80	2.84	2.88	2.92	2.96	3.01	3.05	3.10	3.15	3.24	3.28	3.38	3.51
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MINERAL PROCESSES	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
Stationary Subtotal	**6.04**	**6.30**	**6.37**	**6.49**	**6.57**	**6.67**	**6.76**	**6.86**	**6.96**	**7.06**	**7.16**	**7.34**	**7.44**	**7.62**	**7.89**
Area-Wide															
CONSUMER PRODUCTS	2.31	2.17	2.21	2.31	2.38	2.45	2.54	2.63	2.72	2.80	2.89	3.05	3.14	3.31	3.56
ARCHITECTURAL COATINGS AND RELATED PROC	1.26	1.08	1.09	1.10	1.11	1.12	1.13	1.13	1.14	1.15	1.16	1.18	1.18	1.20	1.23
PESTICIDES/FERTILIZERS	0.20	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
ASPHALT PAVING / ROOFING	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
RESIDENTIAL FUEL COMBUSTION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
FARMING OPERATIONS	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.31	0.32	0.33	0.34	0.34	0.35	0.36	0.36	0.37	0.38	0.39	0.40	0.41	0.42	0.44
COOKING	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
Area-Wide Subtotal	**4.38**	**4.19**	**4.24**	**4.38**	**4.46**	**4.54**	**4.65**	**4.76**	**4.87**	**4.97**	**5.07**	**5.27**	**5.37**	**5.58**	**5.87**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	4.01	3.31	2.97	2.52	2.36	2.19	2.01	1.84	1.69	1.56	1.45	1.27	1.19	1.07	0.93
LIGHT DUTY TRUCKS - 1 (LDT1)	1.02	0.89	0.79	0.66	0.60	0.55	0.51	0.47	0.43	0.40	0.37	0.31	0.29	0.26	0.23
LIGHT DUTY TRUCKS - 2 (LDT2)	1.54	1.49	1.38	1.23	1.20	1.16	1.12	1.08	1.04	1.01	0.97	0.92	0.89	0.85	0.81
MEDIUM DUTY TRUCKS (MDV)	0.89	0.83	0.75	0.67	0.66	0.64	0.63	0.61	0.60	0.59	0.57	0.55	0.54	0.51	0.47
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.54	0.49	0.36	0.23	0.21	0.20	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.15
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.06	0.06	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.13	0.11	0.08	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.44	0.49	0.49	0.36	0.34	0.32	0.30	0.27	0.25	0.24	0.23	0.20	0.19	0.16	0.14
MOTORCYCLES (MCY)	0.49	0.79	0.73	0.65	0.64	0.63	0.61	0.62	0.62	0.64	0.65	0.67	0.68	0.71	0.75
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
On-Road Subtotal	**9.26**	**8.62**	**7.73**	**6.52**	**6.19**	**5.85**	**5.54**	**5.23**	**4.96**	**4.75**	**4.55**	**4.21**	**4.06**	**3.83**	**3.58**
Other Mobile															
AIRCRAFT	0.71	0.78	0.80	0.85	0.88	0.91	0.94	0.98	1.02	1.05	1.08	1.15	1.18	1.25	1.35
TRAINS	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.21
RECREATIONAL BOATS	0.23	0.23	0.22	0.21	0.20	0.19	0.19	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17
OFF-ROAD RECREATIONAL VEHICLES	0.35	0.45	0.47	0.50	0.52	0.53	0.55	0.57	0.58	0.60	0.63	0.67	0.69	0.74	0.82
OFF-ROAD EQUIPMENT	2.13	2.09	1.99	1.85	1.78	1.72	1.67	1.62	1.57	1.53	1.49	1.41	1.38	1.33	1.31
FARM EQUIPMENT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
FUEL STORAGE AND HANDLING	0.48	0.45	0.43	0.31	0.28	0.26	0.24	0.22	0.21	0.20	0.18	0.17	0.16	0.15	0.13
SHIPS AND COMMERCIAL BOATS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**4.09**	**4.18**	**4.11**	**3.90**	**3.84**	**3.80**	**3.78**	**3.76**	**3.75**	**3.75**	**3.75**	**3.76**	**3.78**	**3.84**	**4.00**
Grand Total	**23.77**	**23.29**	**22.45**	**21.29**	**21.07**	**20.86**	**20.73**	**20.62**	**20.55**	**20.53**	**20.53**	**20.59**	**20.65**	**20.86**	**21.34**

ROG - Antelope Valley															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.14	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.12	-0.09	-0.11	-0.15	-0.17	-0.20	-0.22	-0.25	-0.28	-0.31	-0.34	-0.41	-0.44	-0.51	-0.65
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04	-0.05
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	-0.11	-0.11	-0.12	-0.12	-0.13	-0.13	-0.14	-0.14	-0.15
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.23**	**-0.33**	**-0.21**	**-0.26**	**-0.28**	**-0.31**	**-0.35**	**-0.39**	**-0.42**	**-0.46**	**-0.50**	**-0.58**	**-0.62**	**-0.71**	**-0.87**

* These are already included in "Adjusted Baseline" sheets

and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Butte County

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NOX - Butte County - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.60	0.63	0.63	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
COGENERATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANUFACTURING AND INDUSTRIAL	0.31	0.34	0.35	0.36	0.36	0.37	0.38	0.39	0.39	0.40	0.41	0.42	0.43	0.44	0.46
FOOD AND AGRICULTURAL PROCESSING	0.27	0.26	0.26	0.24	0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.17	0.17	0.15	0.12
SERVICE AND COMMERCIAL	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
OTHER (FUEL COMBUSTION)	0.24	0.26	0.26	0.25	0.25	0.24	0.24	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.23
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**1.66**	**1.71**	**1.72**	**1.72**	**1.72**	**1.72**	**1.71**	**1.71**	**1.71**	**1.71**	**1.71**	**1.70**	**1.69**	**1.68**	**1.68**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.68	0.66	0.66	0.65	0.64	0.64	0.64	0.63	0.63	0.62	0.62	0.61	0.61	0.60	0.59
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.97**	**0.96**	**0.96**	**0.95**	**0.95**	**0.94**	**0.94**	**0.93**	**0.93**	**0.93**	**0.92**	**0.92**	**0.91**	**0.90**	**0.89**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	2.21	1.62	1.53	1.35	1.24	1.14	1.03	0.93	0.84	0.75	0.68	0.57	0.52	0.44	0.35
LIGHT DUTY TRUCKS - 1 (LDT1)	1.86	1.40	1.33	1.19	1.11	1.03	0.95	0.88	0.81	0.73	0.67	0.56	0.51	0.43	0.33
LIGHT DUTY TRUCKS - 2 (LDT2)	1.56	1.38	1.31	1.17	1.09	1.02	0.94	0.87	0.81	0.75	0.69	0.60	0.55	0.48	0.40
MEDIUM DUTY TRUCKS (MDV)	0.61	0.64	0.61	0.56	0.53	0.50	0.47	0.45	0.42	0.39	0.36	0.32	0.30	0.26	0.21
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.17	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.15	0.13	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08	0.07	0.06	0.06	0.05	0.04
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.14	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.04
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.46	0.41	0.32	0.29	0.26	0.24	0.22	0.20	0.19	0.17	0.15	0.15	0.13	0.11
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.15	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.11	0.11	0.09	0.08
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.69	0.79	0.78	0.73	0.70	0.66	0.61	0.56	0.51	0.47	0.42	0.36	0.33	0.28	0.23
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	5.12	5.50	7.04	6.53	6.34	6.01	5.47	4.95	4.47	4.03	3.64	3.13	2.90	2.52	2.12
MOTORCYCLES (MCY)	0.04	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.10	0.10
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09
OTHER BUSES (OB)	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03
MOTOR HOMES (MH)	0.13	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.05
On-Road Subtotal	**13.11**	**12.91**	**14.12**	**12.91**	**12.36**	**11.64**	**10.71**	**9.81**	**8.96**	**8.19**	**7.49**	**6.51**	**6.06**	**5.32**	**4.45**
Other Mobile															
AIRCRAFT	0.22	0.24	0.25	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.33
TRAINS	3.19	2.60	2.43	2.32	2.31	2.21	2.23	2.25	2.27	2.28	2.30	2.35	2.37	2.42	2.51
RECREATIONAL BOATS	0.26	0.35	0.38	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.42	0.43	0.43	0.44
OFF-ROAD RECREATIONAL VEHICLES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
OFF-ROAD EQUIPMENT	3.21	3.02	2.93	2.66	2.54	2.40	2.29	2.19	2.07	1.96	1.84	1.63	1.53	1.38	1.23
FARM EQUIPMENT	3.94	3.57	3.45	3.12	2.99	2.88	2.74	2.55	2.37	2.22	2.06	1.76	1.61	1.36	1.05
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**10.83**	**9.79**	**9.44**	**8.78**	**8.51**	**8.17**	**7.95**	**7.68**	**7.41**	**7.18**	**6.93**	**6.47**	**6.26**	**5.92**	**5.58**
Grand Total	**26.57**	**25.38**	**26.24**	**24.35**	**23.54**	**22.46**	**21.30**	**20.14**	**19.02**	**18.00**	**17.04**	**15.59**	**14.93**	**13.83**	**12.61**

NOX - Butte County															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.63	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.01	-0.22	-0.20	-0.22	-0.20	-0.18	-0.16	-0.14	-0.12	-0.10	-0.09	-0.06	-0.05	-0.03	-0.01
Public Fleet	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	-0.04	-0.13	-0.31	-0.33	-0.35	-0.35	-0.36	-0.37	-0.37	-0.38	-0.41	-0.43	-0.45	-0.48
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.05	-0.06	-0.05	-0.04	-0.04	-0.05	-0.06	-0.06	-0.06	-0.06	-0.06	-0.04	-0.03	0.00	0.00
Off-road	0.00	-0.01	-0.01	-0.03	-0.05	-0.09	-0.09	-0.09	-0.10	-0.09	-0.09	-0.07	-0.07	-0.06	-0.05
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.06**	**-1.96**	**-0.39**	**-0.60**	**-0.63**	**-0.68**	**-0.67**	**-0.66**	**-0.65**	**-0.63**	**-0.61**	**-0.59**	**-0.58**	**-0.55**	**-0.55**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Butte County - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURAL PROCESSING	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
SERVICE AND COMMERCIAL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (FUEL COMBUSTION)	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.47	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.48	0.49	0.49	0.50	0.51
COATINGS AND RELATED PROCESS SOLVENTS	0.28	0.30	0.30	0.32	0.32	0.33	0.34	0.35	0.35	0.36	0.37	0.37	0.38	0.40	0.41
PRINTING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
ADHESIVES AND SEALANTS	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07
OIL AND GAS PRODUCTION	0.09	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.15	0.16
PETROLEUM MARKETING	0.64	0.66	0.66	0.65	0.65	0.65	0.65	0.66	0.67	0.68	0.68	0.69	0.70	0.72	0.74
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17	0.17	0.18	0.19
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**1.96**	**1.99**	**1.99**	**2.00**	**2.02**	**2.03**	**2.05**	**2.08**	**2.10**	**2.12**	**2.14**	**2.18**	**2.21**	**2.25**	**2.32**
Area-Wide															
CONSUMER PRODUCTS	1.53	1.36	1.36	1.37	1.39	1.40	1.42	1.44	1.45	1.47	1.49	1.53	1.55	1.58	1.62
ARCHITECTURAL COATINGS AND RELATED PROCES	0.85	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.75	0.76	0.76	0.77	0.78	0.79	0.81
PESTICIDES/FERTILIZERS	1.38	1.02	1.01	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.88
ASPHALT PAVING / ROOFING	3.53	3.60	3.63	3.61	3.60	3.60	3.60	3.61	3.61	3.61	3.61	3.63	3.63	3.64	3.66
RESIDENTIAL FUEL COMBUSTION	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
FARMING OPERATIONS	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	1.02	1.01	1.00	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95	0.94	0.94	0.92	0.91
COOKING	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Area-Wide Subtotal	**8.99**	**8.38**	**8.39**	**8.36**	**8.36**	**8.36**	**8.37**	**8.38**	**8.40**	**8.41**	**8.42**	**8.46**	**8.48**	**8.51**	**8.54**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	3.43	2.66	2.51	2.19	2.02	1.84	1.67	1.50	1.36	1.22	1.12	0.96	0.88	0.77	0.64
LIGHT DUTY TRUCKS - 1 (LDT1)	2.23	1.80	1.73	1.57	1.47	1.38	1.29	1.20	1.11	1.02	0.95	0.82	0.76	0.66	0.55
LIGHT DUTY TRUCKS - 2 (LDT2)	1.36	1.28	1.23	1.12	1.07	1.02	0.96	0.90	0.85	0.80	0.75	0.69	0.65	0.60	0.54
MEDIUM DUTY TRUCKS (MDV)	0.46	0.47	0.46	0.43	0.42	0.40	0.39	0.37	0.35	0.34	0.32	0.30	0.29	0.27	0.24
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.27	0.26	0.22	0.17	0.15	0.14	0.13	0.12	0.11	0.11	0.10	0.10	0.10	0.10	0.10
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.14	0.12	0.11	0.10	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.03
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.32	0.26	0.24	0.21	0.19	0.17	0.15	0.13	0.12	0.10	0.09	0.06	0.05	0.04	0.03
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.10	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.02	0.02	0.02	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.36	0.37	0.48	0.46	0.45	0.43	0.40	0.38	0.35	0.33	0.30	0.28	0.27	0.25	0.23
MOTORCYCLES (MCY)	0.31	0.44	0.42	0.39	0.38	0.37	0.36	0.35	0.34	0.34	0.34	0.35	0.36	0.37	0.39
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.06	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01
On-Road Subtotal	**9.08**	**7.87**	**7.60**	**6.81**	**6.40**	**5.98**	**5.56**	**5.16**	**4.79**	**4.43**	**4.13**	**3.71**	**3.50**	**3.18**	**2.81**
Other Mobile															
AIRCRAFT	0.44	0.48	0.49	0.51	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.61	0.62	0.65
TRAINS	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17
RECREATIONAL BOATS	2.58	2.57	2.51	2.39	2.32	2.25	2.20	2.16	2.13	2.10	2.07	2.03	2.02	1.99	2.00
OFF-ROAD RECREATIONAL VEHICLES	0.24	0.29	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.32	0.33	0.35	0.36	0.39	0.43
OFF-ROAD EQUIPMENT	1.64	1.63	1.54	1.39	1.33	1.26	1.20	1.15	1.09	1.05	1.00	0.94	0.91	0.88	0.87
FARM EQUIPMENT	0.81	0.74	0.71	0.63	0.60	0.58	0.55	0.50	0.46	0.42	0.39	0.33	0.30	0.25	0.21
FUEL STORAGE AND HANDLING	0.32	0.30	0.29	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.14	0.13	0.12	0.11	0.10
OFF-ROAD SUB-TOTAL	**6.19**	**6.18**	**5.98**	**5.58**	**5.41**	**5.26**	**5.12**	**4.99**	**4.87**	**4.76**	**4.67**	**4.53**	**4.48**	**4.41**	**4.43**
TOTAL INVENTORY	**26.21**	**24.42**	**23.96**	**22.75**	**22.19**	**21.64**	**21.11**	**20.61**	**20.15**	**19.73**	**19.37**	**18.88**	**18.66**	**18.36**	**18.10**

ROG - Butte County															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.11	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.08	-0.25	-0.24	-0.24	-0.23	-0.23	-0.23	-0.22	-0.22	-0.22	-0.22	-0.22	-0.21	-0.21	-0.21
Reflash	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.03	-0.04
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.07	-0.07	-0.07	-0.07
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.02**	**-0.44**	**-0.32**	**-0.32**	**-0.32**	**-0.32**	**-0.32**	**-0.33**	**-0.32**	**-0.33**	**-0.33**	**-0.33**	**-0.33**	**-0.33**	**-0.33**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Central Mountain Counties

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NOX - Central Mountain Counties - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.48	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
COGENERATION	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANUFACTURING AND INDUSTRIAL	1.61	1.67	1.68	1.74	1.76	1.79	1.83	1.86	1.90	1.93	1.99	2.04	2.07	2.12	2.20
SERVICE AND COMMERCIAL	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10
OTHER (FUEL COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
WOOD AND PAPER	0.20	0.21	0.20	0.21	0.22	0.23	0.24	0.24	0.25	0.26	0.26	0.27	0.27	0.29	0.30
Stationary Subtotal	**2.45**	**2.52**	**2.53**	**2.61**	**2.64**	**2.68**	**2.72**	**2.76**	**2.81**	**2.85**	**2.90**	**2.96**	**3.00**	**3.06**	**3.16**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVEN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.14**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.13**	**0.12**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	0.94	0.73	0.69	0.62	0.57	0.53	0.48	0.44	0.40	0.36	0.33	0.27	0.25	0.21	0.17
LIGHT DUTY TRUCKS - 1 (LDT1)	1.29	0.99	0.96	0.91	0.88	0.85	0.82	0.78	0.75	0.72	0.69	0.61	0.58	0.50	0.38
LIGHT DUTY TRUCKS - 2 (LDT2)	0.68	0.66	0.63	0.58	0.55	0.51	0.48	0.45	0.42	0.39	0.37	0.32	0.30	0.26	0.21
MEDIUM DUTY TRUCKS (MDV)	0.30	0.39	0.38	0.36	0.35	0.33	0.32	0.30	0.29	0.27	0.26	0.23	0.21	0.19	0.15
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.07	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.16	0.17
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.02	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.35	0.30	0.24	0.22	0.19	0.18	0.16	0.15	0.14	0.14	0.12	0.11	0.10	0.08
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.11	0.19	0.18	0.17	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.10	0.10	0.08	0.07
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.30	0.39	0.39	0.36	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.20	0.18	0.16	0.13
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.53	0.72	0.71	0.63	0.59	0.55	0.51	0.47	0.43	0.39	0.36	0.30	0.28	0.24	0.20
MOTORCYCLES (MCY)	0.03	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
OTHER BUSES (OB)	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
MOTOR HOMES (MH)	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.05
On-Road Subtotal	**4.77**	**5.06**	**4.89**	**4.49**	**4.29**	**4.06**	**3.84**	**3.62**	**3.42**	**3.22**	**3.04**	**2.70**	**2.54**	**2.27**	**1.91**
Other Mobile															
AIRCRAFT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAINS	0.33	0.27	0.26	0.25	0.25	0.24	0.24	0.25	0.25	0.25	0.25	0.26	0.26	0.27	0.28
RECREATIONAL BOATS	0.54	0.76	0.83	0.90	0.91	0.91	0.92	0.94	0.95	0.96	0.98	1.02	1.04	1.08	1.14
OFF-ROAD RECREATIONAL VEHICLES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
OFF-ROAD EQUIPMENT	1.56	1.48	1.44	1.32	1.27	1.20	1.15	1.10	1.04	0.99	0.92	0.81	0.76	0.68	0.59
FARM EQUIPMENT	1.00	0.90	0.87	0.79	0.75	0.72	0.69	0.64	0.59	0.56	0.52	0.44	0.40	0.34	0.26
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD SUB-TOTAL	**3.45**	**3.44**	**3.41**	**3.28**	**3.19**	**3.11**	**3.03**	**2.95**	**2.86**	**2.78**	**2.70**	**2.56**	**2.49**	**2.39**	**2.30**
TOTAL INVENTORY	**10.80**	**11.15**	**10.97**	**10.51**	**10.26**	**9.97**	**9.72**	**9.46**	**9.21**	**8.98**	**8.77**	**8.34**	**8.16**	**7.85**	**7.50**

NOX - Central Mountain Counties															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.21	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	-0.01	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.05
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.01**	**-0.26**	**-0.04**	**-0.07**	**-0.07**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.07**	**-0.07**	**-0.07**	**-0.06**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Central Mountain Counties - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SERVICE AND COMMERCIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (FUEL COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12
COATINGS AND RELATED PROCESS SOLVENTS	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06
PETROLEUM MARKETING	0.17	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.21
FOOD AND AGRICULTURE	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05
MINERAL PROCESSES	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
WOOD AND PAPER	1.10	1.13	1.10	1.17	1.20	1.24	1.27	1.31	1.34	1.38	1.39	1.43	1.46	1.54	1.61
Stationary Subtotal	**1.73**	**1.77**	**1.74**	**1.81**	**1.85**	**1.88**	**1.93**	**1.96**	**2.00**	**2.03**	**2.05**	**2.10**	**2.14**	**2.22**	**2.31**
Area-Wide															
CONSUMER PRODUCTS	0.59	0.54	0.54	0.53	0.53	0.53	0.54	0.55	0.56	0.56	0.57	0.59	0.59	0.61	0.63
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLV	0.32	0.34	0.34	0.35	0.35	0.36	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.40	0.41
PESTICIDES/FERTILIZERS	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
ASPHALT PAVING / ROOFING	0.89	0.92	0.93	0.94	0.95	0.95	0.96	0.96	0.97	0.97	0.97	0.97	0.98	0.98	0.98
RESIDENTIAL FUEL COMBUSTION	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.28
FARMING OPERATIONS	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.89	0.86	0.85	0.83	0.82	0.81	0.80	0.79	0.77	0.76	0.75	0.73	0.72	0.70	0.66
COOKING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Area-Wide Subtotal	**4.19**	**4.16**	**4.17**	**4.15**	**4.16**	**4.16**	**4.17**	**4.17**	**4.18**	**4.19**	**4.19**	**4.20**	**4.20**	**4.21**	**4.22**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.48	1.20	1.13	0.98	0.90	0.82	0.74	0.67	0.61	0.55	0.51	0.43	0.40	0.35	0.30
LIGHT DUTY TRUCKS - 1 (LDT1)	1.57	1.30	1.29	1.25	1.23	1.21	1.18	1.16	1.13	1.10	1.07	1.00	0.96	0.88	0.74
LIGHT DUTY TRUCKS - 2 (LDT2)	0.63	0.62	0.60	0.55	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.36	0.35	0.33	0.31
MEDIUM DUTY TRUCKS (MDV)	0.20	0.28	0.27	0.26	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.18	0.17
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.14	0.17	0.15	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.15	0.12	0.12	0.10	0.10	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.18	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.04	0.04	0.03	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.11	0.10	0.09	0.07	0.07	0.06	0.05	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.04	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02
MOTORCYCLES (MCY)	0.19	0.31	0.30	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.30	0.32
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
MOTOR HOMES (MH)	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
On-Road Subtotal	**4.77**	**4.39**	**4.21**	**3.86**	**3.68**	**3.50**	**3.34**	**3.18**	**3.03**	**2.88**	**2.76**	**2.55**	**2.45**	**2.28**	**2.05**
Other Mobile															
AIRCRAFT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TRAINS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
RECREATIONAL BOATS	7.07	6.36	6.14	5.67	5.41	5.18	4.98	4.82	4.67	4.54	4.42	4.22	4.13	3.97	3.88
OFF-ROAD RECREATIONAL VEHICLES	0.70	0.87	0.90	0.95	0.98	1.01	1.04	1.07	1.10	1.14	1.18	1.26	1.31	1.40	1.56
OFF-ROAD EQUIPMENT	0.60	0.59	0.56	0.51	0.49	0.47	0.45	0.43	0.41	0.39	0.38	0.36	0.35	0.34	0.34
FARM EQUIPMENT	0.20	0.19	0.18	0.16	0.15	0.14	0.14	0.12	0.11	0.10	0.10	0.08	0.07	0.06	0.05
FUEL STORAGE AND HANDLING	0.12	0.12	0.11	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04
OFF-ROAD SUB-TOTAL	**8.72**	**8.14**	**7.92**	**7.39**	**7.12**	**6.89**	**6.70**	**6.53**	**6.38**	**6.26**	**6.16**	**5.99**	**5.93**	**5.84**	**5.90**
TOTAL INVENTORY	**19.41**	**18.46**	**18.04**	**17.21**	**16.81**	**16.44**	**16.13**	**15.84**	**15.59**	**15.37**	**15.16**	**14.85**	**14.73**	**14.55**	**14.47**

ROG - Central Mountain Counties															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.01	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.00**	**-0.02**	**0.00**	**-0.03**	**-0.03**	**-0.03**	**-0.03**	**-0.04**	**-0.04**	**-0.04**	**-0.05**	**-0.05**	**-0.05**	**-0.06**	**-0.07**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Coachella Valley

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NOX - Coachella - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.063	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
COGENERATION	0.001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.24
FOOD AND AGRICULTURAL PROCESSING	0.09	0.12	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11
SERVICE AND COMMERCIAL	0.34	0.33	0.32	0.31	0.31	0.28	0.28	0.27	0.26	0.25	0.24	0.24	0.24	0.24	0.25
OTHER (FUEL COMBUSTION)	0.20	0.18	0.18	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.12	0.11	0.11	0.10	0.10
INCINERATORS	0.03	0.10	0.11	0.12	0.13	0.14	0.14	0.15	0.16	0.16	0.17	0.17	0.17	0.18	0.19
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**0.915**	**0.987**	**0.956**	**0.964**	**0.956**	**0.932**	**0.925**	**0.918**	**0.912**	**0.905**	**0.906**	**0.911**	**0.912**	**0.915**	**0.945**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PRO(	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.47	0.44	0.41	0.42	0.43	0.37	0.37	0.38	0.39	0.40	0.36	0.37	0.38	0.39	0.41
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.490**	**0.466**	**0.433**	**0.446**	**0.456**	**0.390**	**0.398**	**0.405**	**0.413**	**0.422**	**0.380**	**0.394**	**0.400**	**0.413**	**0.432**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	3.08	2.21	1.99	1.69	1.55	1.41	1.29	1.18	1.09	0.99	0.91	0.78	0.72	0.63	0.53
LIGHT DUTY TRUCKS - 1 (LDT1)	0.78	0.61	0.55	0.48	0.44	0.41	0.38	0.35	0.32	0.30	0.27	0.23	0.21	0.18	0.15
LIGHT DUTY TRUCKS - 2 (LDT2)	2.11	1.75	1.59	1.39	1.31	1.24	1.16	1.09	1.02	0.96	0.90	0.79	0.74	0.66	0.57
MEDIUM DUTY TRUCKS (MDV)	1.17	1.10	1.00	0.87	0.83	0.79	0.75	0.72	0.68	0.64	0.60	0.53	0.50	0.44	0.37
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.56	0.50	0.40	0.31	0.30	0.30	0.28	0.27	0.26	0.26	0.25	0.24	0.24	0.24	0.23
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.08	0.10	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.23	0.25	0.21	0.17	0.17	0.16	0.15	0.13	0.12	0.11	0.11	0.09	0.08	0.07	0.05
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.32	0.35	0.29	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.18	0.17	0.17
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.60	0.47	0.33	0.32	0.29	0.26	0.24	0.22	0.20	0.18	0.16	0.15	0.14	0.11
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.25	0.41	0.34	0.26	0.26	0.24	0.22	0.20	0.19	0.17	0.16	0.14	0.13	0.11	0.09
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.89	2.30	1.94	1.54	1.50	1.40	1.23	1.11	1.01	0.89	0.81	0.64	0.59	0.50	0.37
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	29.80	31.86	34.02	25.90	24.74	23.06	21.14	19.28	17.45	15.72	14.23	11.80	10.84	9.29	7.94
MOTORCYCLES (MCY)	0.04	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.13
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.11	0.11	0.10	0.06	0.04
HEAVY DUTY GAS URBAN BUSES (UB)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.07
SCHOOL BUSES (SB)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14
OTHER BUSES (OB)	0.10	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.08	0.08	0.07	0.06	0.05	0.05	0.04
MOTOR HOMES (MH)	0.17	0.18	0.17	0.15	0.14	0.14	0.13	0.12	0.11	0.11	0.10	0.08	0.08	0.07	0.06
On-Road Subtotal	**40.92**	**42.76**	**43.61**	**33.93**	**32.40**	**30.26**	**27.79**	**25.49**	**23.26**	**21.11**	**19.29**	**16.21**	**15.01**	**13.03**	**11.11**
Other Mobile															
AIRCRAFT	0.14	0.81	1.03	1.47	1.69	1.91	2.00	2.09	2.18	2.27	2.36	2.54	2.63	2.81	2.84
TRAINS	3.43	2.86	2.69	2.60	2.60	1.93	1.98	2.02	2.07	2.12	2.16	2.27	2.33	2.44	2.64
RECREATIONAL BOATS	0.23	0.30	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.34	0.34	0.34	0.35
OFF-ROAD RECREATIONAL VEHICLES	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OFF-ROAD EQUIPMENT	4.39	4.15	4.04	3.73	3.57	3.40	3.26	3.12	2.98	2.83	2.67	2.37	2.24	2.01	1.78
FARM EQUIPMENT	1.12	1.01	0.97	0.87	0.83	0.80	0.76	0.70	0.65	0.60	0.56	0.47	0.43	0.36	0.28
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**9.34**	**9.13**	**9.06**	**9.01**	**9.04**	**8.38**	**8.34**	**8.28**	**8.22**	**8.17**	**8.10**	**8.00**	**7.98**	**7.98**	**7.90**
Grand Total	**51.66**	**53.34**	**54.06**	**44.35**	**42.85**	**39.96**	**37.45**	**35.09**	**32.81**	**30.60**	**28.68**	**25.52**	**24.30**	**22.34**	**20.38**

NOX - Coachella															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-9.43	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.06	-1.28	-0.93	-0.85	-0.78	-0.70	-0.62	-0.54	-0.47	-0.40	-0.33	-0.22	-0.18	-0.11	-0.05
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Idling	0.00	-0.25	-0.64	-1.24	-1.28	-1.33	-1.37	-1.40	-1.43	-1.46	-1.49	-1.55	-1.59	-1.66	-1.80
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.05	-0.07	-0.06	-0.03	-0.04	-0.05	-0.06	-0.06	-0.06	-0.06	-0.05	-0.04	-0.03	0.00	0.00
Off-road	0.00	0.00	-0.01	-0.02	-0.04	-0.08	-0.08	-0.08	-0.09	-0.08	-0.08	-0.07	-0.07	-0.06	-0.06
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.12**	**-11.03**	**-1.64**	**-2.16**	**-2.16**	**-2.18**	**-2.14**	**-2.10**	**-2.06**	**-2.01**	**-1.97**	**-1.90**	**-1.87**	**-1.84**	**-1.91**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Coachella - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
FOOD AND AGRICULTURAL PROCESSING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SERVICE AND COMMERCIAL	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (FUEL COMBUSTION)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
DEGREASING	0.24	0.13	0.14	0.16	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24
COATINGS AND RELATED PROCESS SOLVENTS	0.46	0.75	0.77	0.72	0.76	0.78	0.81	0.84	0.86	0.89	0.91	0.94	0.96	0.99	1.04
PRINTING	0.04	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
ADHESIVES AND SEALANTS	0.10	0.10	0.11	0.13	0.14	0.14	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.19
OTHER (CLEANING AND SURFACE COATINGS)	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
PETROLEUM MARKETING	0.52	0.53	0.54	0.55	0.55	0.56	0.57	0.58	0.59	0.60	0.61	0.63	0.64	0.66	0.69
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.06	0.23	0.25	0.30	0.32	0.34	0.36	0.37	0.39	0.40	0.42	0.44	0.45	0.47	0.50
FOOD AND AGRICULTURE	0.05	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14
MINERAL PROCESSES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.01	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08
OTHER (INDUSTRIAL PROCESSES)	0.15	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.23	0.23	0.24	0.25	0.26	0.27
Stationary Subtotal	1.74	2.20	2.28	2.35	2.44	2.54	2.61	2.68	2.76	2.83	2.91	3.01	3.06	3.16	3.33
Area-Wide															
CONSUMER PRODUCTS	2.48	2.49	2.57	2.60	2.66	2.73	2.79	2.86	2.93	3.00	3.07	3.20	3.27	3.40	3.60
ARCHITECTURAL COATINGS AND RELATED PROC	1.30	1.14	0.79	0.72	0.74	0.76	0.79	0.81	0.83	0.86	0.88	0.92	0.95	0.99	1.06
PESTICIDES/FERTILIZERS	0.62	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
ASPHALT PAVING / ROOFING	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07
RESIDENTIAL FUEL COMBUSTION	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
FARMING OPERATIONS	0.20	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03
COOKING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Area-Wide Subtotal	4.70	4.60	4.33	4.29	4.38	4.46	4.56	4.65	4.75	4.84	4.94	5.12	5.21	5.39	5.67

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	4.09	3.29	2.98	2.52	2.33	2.15	1.99	1.85	1.72	1.61	1.51	1.35	1.28	1.17	1.03
LIGHT DUTY TRUCKS - 1 (LDT1)	0.84	0.73	0.67	0.58	0.55	0.51	0.49	0.46	0.43	0.41	0.39	0.35	0.32	0.30	0.27
LIGHT DUTY TRUCKS - 2 (LDT2)	1.43	1.35	1.26	1.16	1.13	1.11	1.08	1.05	1.03	1.00	0.98	0.94	0.92	0.89	0.86
MEDIUM DUTY TRUCKS (MDV)	0.75	0.74	0.69	0.64	0.63	0.62	0.62	0.61	0.60	0.59	0.58	0.57	0.56	0.54	0.52
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.38	0.36	0.27	0.19	0.17	0.16	0.15	0.14	0.14	0.13	0.12	0.12	0.12	0.12	0.11
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.07	0.07	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.22	0.20	0.16	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.06	0.05	0.04	0.03	0.03
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.09	0.11	0.09	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	2.25	2.50	2.65	2.07	1.97	1.85	1.71	1.58	1.45	1.31	1.20	1.02	0.95	0.84	0.77
MOTORCYCLES (MCY)	0.26	0.54	0.53	0.51	0.50	0.50	0.50	0.50	0.51	0.51	0.52	0.51	0.52	0.54	0.53
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
On-Road Subtotal	10.48	9.99	9.44	7.98	7.59	7.19	6.79	6.43	6.11	5.77	5.51	5.04	4.86	4.57	4.23
Other Mobile															
AIRCRAFT	0.25	0.30	0.31	0.34	0.36	0.38	0.38	0.39	0.40	0.41	0.42	0.44	0.45	0.46	0.47
TRAINS	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.29	0.29	0.30	0.31
RECREATIONAL BOATS	1.21	1.29	1.27	1.24	1.21	1.20	1.18	1.18	1.17	1.17	1.17	1.18	1.18	1.20	1.25
OFF-ROAD RECREATIONAL VEHICLES	0.46	0.52	0.50	0.49	0.50	0.50	0.51	0.52	0.54	0.55	0.56	0.60	0.62	0.66	0.73
OFF-ROAD EQUIPMENT	2.38	2.57	2.40	2.18	2.10	2.02	1.98	1.95	1.93	1.91	1.90	1.89	1.90	1.94	2.10
FARM EQUIPMENT	0.23	0.21	0.20	0.18	0.17	0.17	0.16	0.14	0.13	0.12	0.11	0.09	0.08	0.07	0.06
FUEL STORAGE AND HANDLING	0.54	0.56	0.54	0.40	0.38	0.36	0.34	0.32	0.30	0.29	0.28	0.26	0.25	0.24	0.23
Other Mobile Subtotal	5.33	5.72	5.50	5.11	4.99	4.89	4.83	4.78	4.75	4.73	4.73	4.75	4.78	4.88	5.16
Grand Total	22.25	22.51	21.55	19.73	19.40	19.08	18.79	18.55	18.37	18.18	18.08	17.92	17.91	18.01	18.38

ROG - Coachella															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.70	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.34	-0.18	-0.15	-0.09	-0.07	-0.04	-0.03	-0.01	0.00	0.02	0.03	0.05	0.07	0.09	0.12
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04	-0.06
Moyer	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.11	-0.12	-0.12	-0.12	-0.12	-0.13	-0.13	-0.13	-0.14	-0.14	-0.15	-0.16
Off-road	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.34**	**-0.88**	**-0.15**	**-0.22**	**-0.21**	**-0.20**	**-0.19**	**-0.19**	**-0.17**	**-0.17**	**-0.16**	**-0.14**	**-0.13**	**-0.12**	**-0.10**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Eastern Kern County

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NOX - Eastern Kern - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
MANUFACTURING AND INDUSTRIAL	0.85	0.92	0.95	0.99	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.16	1.18	1.21	1.26
SERVICE AND COMMERCIAL	0.36	0.36	0.36	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.42	0.43	0.43	0.44	0.46
OTHER (FUEL COMBUSTION)	0.54	0.55	0.56	0.58	0.60	0.61	0.63	0.64	0.65	0.67	0.68	0.71	0.72	0.74	0.78
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	12.60	13.58	13.96	14.35	14.50	14.74	14.96	15.17	15.38	15.59	15.80	16.22	16.42	16.84	17.46
METAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	3.75	4.05	4.17	4.28	4.32	4.39	4.47	4.50	4.58	4.65	4.69	4.80	4.88	4.99	5.18
Stationary Subtotal	**18.16**	**19.54**	**20.07**	**20.64**	**20.87**	**21.23**	**21.56**	**21.85**	**22.18**	**22.51**	**22.80**	**23.40**	**23.71**	**24.31**	**25.23**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.17	0.89	0.85	0.71	0.63	0.57	0.51	0.47	0.42	0.39	0.35	0.30	0.27	0.24	0.20
LIGHT DUTY TRUCKS - 1 (LDT1)	1.00	0.73	0.72	0.65	0.60	0.57	0.54	0.51	0.48	0.45	0.42	0.35	0.32	0.27	0.20
LIGHT DUTY TRUCKS - 2 (LDT2)	0.85	0.78	0.77	0.68	0.62	0.58	0.54	0.50	0.47	0.43	0.40	0.35	0.32	0.28	0.24
MEDIUM DUTY TRUCKS (MDV)	0.35	0.41	0.40	0.37	0.34	0.32	0.30	0.29	0.27	0.25	0.24	0.21	0.20	0.17	0.14
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.10	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.21	0.22	0.20	0.18	0.17	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.28	0.25	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.14	0.12	0.12	0.10	0.09
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.12	0.20	0.19	0.18	0.18	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.07
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.40	0.51	0.51	0.49	0.49	0.47	0.45	0.42	0.39	0.37	0.34	0.29	0.27	0.23	0.19
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	12.03	10.13	16.00	13.70	12.81	11.69	10.88	10.05	9.22	8.42	7.68	6.46	5.97	5.19	4.28
MOTORCYCLES (MCY)	0.07	0.13	0.14	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.20	0.21
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.09	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13
OTHER BUSES (OB)	0.03	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02
MOTOR HOMES (MH)	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.03
On-Road Subtotal	**16.69**	**14.78**	**20.54**	**17.82**	**16.68**	**15.36**	**14.35**	**13.34**	**12.34**	**11.37**	**10.47**	**8.96**	**8.34**	**7.34**	**6.17**
Other Mobile															
AIRCRAFT	1.43	1.43	1.43	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.45
TRAINS	8.33	6.96	6.56	6.34	6.36	4.74	4.85	4.95	5.06	5.18	5.30	5.56	5.69	5.98	6.47
RECREATIONAL BOATS	0.10	0.12	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
OFF-ROAD RECREATIONAL VEHICLES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD EQUIPMENT	3.25	3.08	2.98	2.77	2.66	2.55	2.43	2.31	2.18	2.05	1.92	1.68	1.58	1.39	1.19
FARM EQUIPMENT	1.03	0.92	0.88	0.79	0.76	0.73	0.69	0.64	0.59	0.55	0.50	0.42	0.39	0.32	0.25
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD SUB-TOTAL	**14.13**	**12.51**	**11.99**	**11.47**	**11.35**	**9.59**	**9.53**	**9.47**	**9.41**	**9.36**	**9.30**	**9.25**	**9.24**	**9.29**	**9.49**
TOTAL INVENTORY	**49.13**	**46.98**	**52.75**	**50.08**	**49.05**	**46.33**	**45.59**	**44.81**	**44.08**	**43.38**	**42.72**	**41.76**	**41.44**	**41.09**	**41.04**

NOX - Eastern Kern															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-3.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.03	-0.41	-0.44	-0.45	-0.40	-0.35	-0.32	-0.28	-0.25	-0.21	-0.18	-0.12	-0.10	-0.06	-0.03
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Idling	0.00	-0.08	-0.30	-0.65	-0.67	-0.68	-0.70	-0.73	-0.76	-0.78	-0.80	-0.85	-0.87	-0.93	-0.97
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.02	-0.03	-0.03	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.03	-0.04	-0.04	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.05**	**-3.51**	**-0.77**	**-1.14**	**-1.12**	**-1.10**	**-1.10**	**-1.09**	**-1.08**	**-1.07**	**-1.05**	**-1.03**	**-1.02**	**-1.01**	**-1.02**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Eastern Kern - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
MANUFACTURING AND INDUSTRIAL	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SERVICE AND COMMERCIAL	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
OTHER (FUEL COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.44	0.42	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41
COATINGS AND RELATED PROCESS SOLVENTS	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13	0.13
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.24	0.25
OTHER (PETROLEUM PRODUCTION AND MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
Stationary Subtotal	**1.00**	**0.98**	**0.97**	**0.98**	**0.98**	**0.99**	**1.00**	**1.01**	**1.02**	**1.03**	**1.03**	**1.05**	**1.06**	**1.07**	**1.10**
Area-Wide															
CONSUMER PRODUCTS	0.69	0.65	0.65	0.62	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.70	0.71	0.73	0.76
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.35	0.36	0.37	0.37	0.38	0.38	0.38	0.39	0.39	0.39	0.40	0.40	0.41	0.42	0.43
PESTICIDES/FERTILIZERS	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08
ASPHALT PAVING / ROOFING	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
RESIDENTIAL FUEL COMBUSTION	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
FARMING OPERATIONS	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07
COOKING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Area-Wide Subtotal	**1.47**	**1.45**	**1.45**	**1.42**	**1.43**	**1.43**	**1.44**	**1.45**	**1.46**	**1.47**	**1.49**	**1.51**	**1.52**	**1.55**	**1.59**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.33	1.08	1.03	0.85	0.74	0.66	0.59	0.53	0.48	0.44	0.40	0.34	0.32	0.28	0.24
LIGHT DUTY TRUCKS - 1 (LDT1)	0.93	0.72	0.73	0.66	0.60	0.56	0.54	0.50	0.47	0.44	0.41	0.35	0.32	0.27	0.23
LIGHT DUTY TRUCKS - 2 (LDT2)	0.55	0.53	0.53	0.48	0.44	0.41	0.39	0.37	0.35	0.33	0.31	0.28	0.27	0.25	0.23
MEDIUM DUTY TRUCKS (MDV)	0.19	0.22	0.22	0.21	0.19	0.18	0.18	0.17	0.16	0.16	0.15	0.14	0.13	0.13	0.11
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.13	0.15	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.10	0.09	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.02	0.02	0.02	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.09	0.11	0.10	0.08	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.03	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.93	0.80	1.25	1.11	1.03	0.96	0.91	0.86	0.81	0.76	0.71	0.63	0.60	0.55	0.48
MOTORCYCLES (MCY)	0.33	0.54	0.59	0.59	0.56	0.56	0.56	0.56	0.57	0.58	0.59	0.60	0.61	0.64	0.66
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
MOTOR HOMES (MH)	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00
On-Road Subtotal	**4.74**	**4.40**	**4.82**	**4.28**	**3.91**	**3.67**	**3.47**	**3.28**	**3.12**	**2.95**	**2.81**	**2.56**	**2.45**	**2.30**	**2.12**
Other Mobile															
AIRCRAFT	2.43	2.45	2.46	2.47	2.47	2.47	2.48	2.48	2.49	2.49	2.49	2.50	2.50	2.51	2.52
TRAINS	0.63	0.65	0.65	0.64	0.64	0.65	0.66	0.66	0.67	0.68	0.68	0.70	0.71	0.73	0.76
RECREATIONAL BOATS	0.45	0.48	0.47	0.45	0.45	0.44	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.44
OFF-ROAD RECREATIONAL VEHICLES	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.09
OFF-ROAD EQUIPMENT	0.77	0.77	0.72	0.66	0.63	0.60	0.57	0.55	0.52	0.50	0.48	0.44	0.43	0.40	0.39
FARM EQUIPMENT	0.21	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.08	0.07	0.06	0.05
FUEL STORAGE AND HANDLING	0.13	0.13	0.12	0.09	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05
OFF-ROAD SUB-TOTAL	**4.69**	**4.75**	**4.68**	**4.54**	**4.50**	**4.46**	**4.42**	**4.39**	**4.35**	**4.33**	**4.31**	**4.27**	**4.27**	**4.26**	**4.29**
TOTAL INVENTORY	**11.89**	**11.58**	**11.92**	**11.22**	**10.81**	**10.54**	**10.34**	**10.13**	**9.95**	**9.78**	**9.64**	**9.39**	**9.30**	**9.18**	**9.10**

ROG - Eastern Kern															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.23	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.00	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.04	-0.04
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.05
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.00**	**-0.24**	**-0.02**	**-0.07**	**-0.07**	**-0.08**	**-0.08**	**-0.09**	**-0.09**	**-0.09**	**-0.09**	**-0.10**	**-0.10**	**-0.10**	**-0.11**

* These are already included in "Adjusted Baseline" sheets

and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Imperial County

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NOX - Imperial County - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
MANUFACTURING AND INDUSTRIAL	5.92	6.11	6.17	6.22	6.28	6.34	6.42	6.50	6.57	6.65	6.73	6.84	6.90	7.01	7.19
FOOD AND AGRICULTURAL PROCESSING	0.71	0.70	0.69	0.67	0.67	0.66	0.65	0.65	0.65	0.64	0.64	0.62	0.61	0.59	0.56
SERVICE AND COMMERCIAL	0.29	0.30	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
OTHER (FUEL COMBUSTION)	0.15	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.21
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stationary Subtotal	**8.52**	**8.73**	**8.79**	**8.84**	**8.89**	**8.95**	**9.02**	**9.11**	**9.18**	**9.25**	**9.33**	**9.43**	**9.49**	**9.59**	**9.75**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.85	0.84	0.83	0.82	0.82	0.81	0.81	0.81	0.80	0.80	0.79	0.78	0.78	0.77	0.75
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.92**	**0.90**	**0.90**	**0.89**	**0.89**	**0.88**	**0.88**	**0.87**	**0.87**	**0.87**	**0.86**	**0.85**	**0.85**	**0.84**	**0.83**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	2.57	2.13	2.05	1.88	1.79	1.72	1.66	1.61	1.57	1.53	1.50	1.48	1.48	1.52	1.55
LIGHT DUTY TRUCKS - 1 (LDT1)	1.29	0.91	0.88	0.82	0.78	0.75	0.71	0.67	0.64	0.60	0.56	0.48	0.44	0.37	0.28
LIGHT DUTY TRUCKS - 2 (LDT2)	1.14	1.13	1.08	0.99	0.95	0.91	0.86	0.81	0.76	0.72	0.67	0.59	0.55	0.48	0.40
MEDIUM DUTY TRUCKS (MDV)	0.28	0.42	0.38	0.33	0.32	0.30	0.29	0.28	0.27	0.27	0.26	0.24	0.23	0.20	0.17
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.05	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.15	0.15	0.14	0.14	0.13	0.13	0.12	0.11	0.11	0.10	0.09	0.08	0.07	0.06	0.05
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.13	0.15	0.14	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.21	0.18	0.14	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.05
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.07	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.05	0.05	0.04
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.56	0.64	0.63	0.60	0.58	0.55	0.52	0.49	0.45	0.42	0.38	0.32	0.30	0.25	0.21
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	12.91	13.35	16.55	14.40	13.54	12.39	11.81	11.16	10.47	9.78	9.09	7.84	7.34	6.59	6.01
MOTORCYCLES (MCY)	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.12	0.12	0.13
OTHER BUSES (OB)	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.04	0.03
MOTOR HOMES (MH)	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02
On-Road Subtotal	**19.49**	**19.59**	**22.56**	**19.95**	**18.86**	**17.49**	**16.69**	**15.84**	**14.97**	**14.09**	**13.23**	**11.68**	**11.05**	**10.11**	**9.29**
Other Mobile															
AIRCRAFT	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
TRAINS	6.98	5.82	5.47	5.28	5.30	3.92	4.02	4.11	4.20	4.30	4.40	4.61	4.73	4.97	5.38
RECREATIONAL BOATS	0.32	0.40	0.42	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.42
OFF-ROAD RECREATIONAL VEHICLES	0.06	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.11	0.11	0.12	0.13	0.14
OFF-ROAD EQUIPMENT	1.72	1.63	1.59	1.48	1.42	1.36	1.30	1.25	1.19	1.13	1.06	0.95	0.90	0.81	0.72
FARM EQUIPMENT	2.78	2.52	2.44	2.21	2.11	2.04	1.94	1.81	1.68	1.57	1.46	1.24	1.14	0.96	0.75
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD SUB-TOTAL	**12.64**	**11.23**	**10.78**	**10.27**	**10.14**	**8.63**	**8.56**	**8.47**	**8.38**	**8.31**	**8.24**	**8.13**	**8.10**	**8.09**	**8.20**
TOTAL INVENTORY	**41.58**	**40.45**	**43.03**	**39.95**	**38.77**	**35.95**	**35.15**	**34.30**	**33.40**	**32.52**	**31.67**	**30.10**	**29.50**	**28.63**	**28.06**

NOX - Imperial County															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-3.95	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.03	-0.53	-0.45	-0.47	-0.42	-0.37	-0.34	-0.31	-0.28	-0.25	-0.21	-0.15	-0.12	-0.08	-0.04
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Idling	0.00	-0.10	-0.31	-0.69	-0.70	-0.72	-0.76	-0.81	-0.86	-0.91	-0.95	-1.03	-1.08	-1.18	-1.37
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.02	-0.03	-0.03	-0.02	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.02	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.05**	**-4.62**	**-0.80**	**-1.20**	**-1.18**	**-1.17**	**-1.20**	**-1.22**	**-1.23**	**-1.25**	**-1.25**	**-1.26**	**-1.26**	**-1.29**	**-1.43**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - IMPERIAL - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MANUFACTURING AND INDUSTRIAL	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
FOOD AND AGRICULTURAL PROCESSING	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
SERVICE AND COMMERCIAL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (FUEL COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (WASTE DISPOSAL)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAUNDERING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
DEGREASING	0.20	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.20
COATINGS AND RELATED PROCESS SOLVENTS	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.19
ADHESIVES AND SEALANTS	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.64	0.68	0.69	0.70	0.71	0.71	0.71	0.73	0.73	0.74	0.75	0.76	0.76	0.78	0.79
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08
Stationary Subtotal	**1.32**	**1.35**	**1.36**	**1.38**	**1.39**	**1.40**	**1.40**	**1.42**	**1.43**	**1.45**	**1.46**	**1.48**	**1.48**	**1.51**	**1.53**
Area-Wide															
CONSUMER PRODUCTS	1.16	1.10	1.10	1.08	1.09	1.11	1.13	1.15	1.17	1.19	1.21	1.25	1.28	1.32	1.39
ARCHITECTURAL COATINGS AND RELATED PROCESS S	0.62	0.65	0.66	0.68	0.69	0.70	0.71	0.72	0.73	0.74	0.75	0.77	0.78	0.80	0.84
PESTICIDES/FERTILIZERS	5.26	4.97	4.96	4.94	4.93	4.92	4.91	4.91	4.90	4.89	4.88	4.87	4.86	4.84	4.82
ASPHALT PAVING / ROOFING	1.96	2.05	2.08	2.12	2.13	2.15	2.16	2.17	2.17	2.18	2.19	2.21	2.21	2.22	2.24
RESIDENTIAL FUEL COMBUSTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
FARMING OPERATIONS	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47	9.47
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	2.32	2.28	2.26	2.24	2.23	2.22	2.20	2.19	2.18	2.17	2.16	2.13	2.12	2.09	2.06
COOKING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
Area-Wide Subtotal	**20.82**	**20.54**	**20.57**	**20.56**	**20.58**	**20.60**	**20.62**	**20.64**	**20.66**	**20.68**	**20.70**	**20.73**	**20.75**	**20.79**	**20.85**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	3.59	3.05	2.88	2.51	2.36	2.23	2.12	2.01	1.93	1.85	1.80	1.73	1.70	1.69	1.68
LIGHT DUTY TRUCKS - 1 (LDT1)	1.51	1.18	1.15	1.10	1.07	1.03	0.99	0.96	0.92	0.88	0.83	0.74	0.69	0.60	0.50
LIGHT DUTY TRUCKS - 2 (LDT2)	1.00	1.00	0.96	0.88	0.85	0.82	0.79	0.76	0.72	0.69	0.67	0.62	0.60	0.57	0.54
MEDIUM DUTY TRUCKS (MDV)	0.19	0.29	0.26	0.23	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.10	0.13	0.10	0.08	0.07	0.06	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.12	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.03
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.28	0.25	0.24	0.21	0.20	0.19	0.17	0.15	0.14	0.12	0.11	0.08	0.07	0.05	0.04
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.11	0.11	0.10	0.08	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.04	0.03	0.03	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.00	1.01	1.24	1.10	1.03	0.95	0.93	0.89	0.86	0.82	0.79	0.72	0.69	0.66	0.64
MOTORCYCLES (MCY)	0.09	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.23	0.24	0.25
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
OTHER BUSES (OB)	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
MOTOR HOMES (MH)	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00
On-Road Subtotal	**8.12**	**7.46**	**7.36**	**6.61**	**6.27**	**5.96**	**5.71**	**5.46**	**5.25**	**5.04**	**4.86**	**4.55**	**4.40**	**4.21**	**4.04**
Other Mobile															
AIRCRAFT	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
TRAINS	0.53	0.55	0.55	0.54	0.54	0.55	0.55	0.56	0.56	0.57	0.58	0.59	0.60	0.61	0.64
RECREATIONAL BOATS	0.79	0.84	0.83	0.80	0.79	0.77	0.76	0.75	0.75	0.74	0.74	0.74	0.74	0.74	0.75
OFF-ROAD RECREATIONAL VEHICLES	2.65	3.42	3.62	3.86	3.98	4.10	4.24	4.38	4.52	4.68	4.84	5.19	5.37	5.76	6.40
OFF-ROAD EQUIPMENT	0.76	0.80	0.75	0.69	0.66	0.63	0.61	0.58	0.56	0.53	0.51	0.48	0.47	0.46	0.47
FARM EQUIPMENT	0.58	0.54	0.52	0.46	0.44	0.43	0.40	0.37	0.34	0.31	0.29	0.24	0.22	0.19	0.16
FUEL STORAGE AND HANDLING	0.23	0.23	0.22	0.16	0.15	0.14	0.13	0.13	0.12	0.11	0.11	0.10	0.10	0.09	0.09
OFF-ROAD SUB-TOTAL	**6.44**	**7.29**	**7.39**	**7.43**	**7.47**	**7.53**	**7.60**	**7.67**	**7.75**	**7.85**	**7.97**	**8.24**	**8.40**	**8.76**	**9.41**
TOTAL INVENTORY	**36.70**	**36.65**	**36.69**	**35.98**	**35.72**	**35.48**	**35.33**	**35.19**	**35.09**	**35.02**	**34.98**	**35.00**	**35.04**	**35.26**	**35.83**

ROG - Imperial County															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.29	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.14	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-0.32	-0.32	-0.32	-0.32
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.04	-0.05	-0.06
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.06	-0.06	-0.06
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.14**	**-0.62**	**-0.33**	**-0.39**	**-0.39**	**-0.39**	**-0.40**	**-0.41**	**-0.41**	**-0.41**	**-0.42**	**-0.43**	**-0.43**	**-0.44**	**-0.45**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Sacramento Non-Attainment Area

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NOX - SACNAA - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	1.12	1.12	1.15	1.14	1.15	1.21	1.27	1.33	1.39	1.45	1.51	1.51	1.51	1.51	1.51
COGENERATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION (COMBUSTION)	0.25	0.31	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
MANUFACTURING AND INDUSTRIAL	2.61	2.67	2.69	2.76	2.80	2.85	2.90	2.95	3.00	3.05	3.09	3.19	3.22	3.29	3.41
FOOD AND AGRICULTURAL PROCESSING	8.09	7.22	7.03	6.65	6.47	6.29	6.08	5.87	5.65	5.43	5.21	4.74	4.51	4.01	3.24
SERVICE AND COMMERCIAL	2.29	2.37	2.39	2.41	2.42	2.43	2.45	2.46	2.48	2.49	2.52	2.52	2.52	2.53	2.53
OTHER (FUEL COMBUSTION)	1.05	1.02	0.98	0.90	0.86	0.82	0.79	0.76	0.73	0.70	0.67	0.63	0.61	0.56	0.56
SEWAGE TREATMENT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LANDFILLS	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
INCINERATORS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PRINTING	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PETROLEUM MARKETING	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18
FOOD AND AGRICULTURE	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MINERAL PROCESSES	0.43	0.46	0.47	0.49	0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.58	0.59	0.61	0.64
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**16.21**	**15.53**	**15.38**	**15.04**	**14.90**	**14.81**	**14.71**	**14.61**	**14.50**	**14.40**	**14.28**	**13.91**	**13.70**	**13.27**	**12.67**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	2.85	2.90	2.92	2.96	2.98	3.00	3.02	3.03	3.05	3.07	3.09	3.13	3.15	3.19	3.25
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
MANAGED BURNING AND DISPOSAL	0.42	0.41	0.41	0.41	0.40	0.40	0.40	0.39	0.39	0.39	0.38	0.38	0.38	0.37	0.36
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**3.28**	**3.32**	**3.34**	**3.38**	**3.39**	**3.41**	**3.42**	**3.44**	**3.46**	**3.47**	**3.49**	**3.52**	**3.54**	**3.57**	**3.63**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	18.84	13.17	11.39	9.81	8.99	8.19	7.40	6.70	6.07	5.51	5.01	4.17	3.83	3.28	2.69
LIGHT DUTY TRUCKS - 1 (LDT1)	6.90	5.27	4.53	3.97	3.70	3.42	3.15	2.91	2.68	2.47	2.26	1.87	1.70	1.43	1.13
LIGHT DUTY TRUCKS - 2 (LDT2)	14.14	10.80	9.30	8.20	7.64	7.14	6.66	6.20	5.76	5.36	4.98	4.30	4.00	3.50	2.93
MEDIUM DUTY TRUCKS (MDV)	7.77	6.58	5.66	4.99	4.70	4.44	4.18	3.93	3.69	3.47	3.25	2.84	2.65	2.31	1.87
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.85	2.55	2.29	2.29	2.26	2.24	2.22	2.21	2.20	2.18	2.18	2.14	2.13	2.11	2.07
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.63	0.61	0.57	0.58	0.58	0.58	0.58	0.58	0.57	0.57	0.56	0.54	0.54	0.52	0.51
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.36	1.31	1.19	1.13	1.08	1.04	0.99	0.93	0.87	0.82	0.77	0.66	0.62	0.54	0.45
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.84	1.48	1.26	1.11	1.04	0.96	0.89	0.81	0.74	0.67	0.61	0.50	0.45	0.37	0.29
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.12	3.35	2.77	2.31	2.18	2.01	1.86	1.74	1.64	1.56	1.49	1.32	1.25	1.12	0.94
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	1.48	2.04	1.83	1.69	1.63	1.53	1.44	1.35	1.27	1.19	1.12	0.98	0.91	0.80	0.65
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	11.49	11.84	10.74	9.87	9.45	8.83	8.16	7.50	6.88	6.30	5.76	4.78	4.36	3.64	2.85
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	34.19	36.92	41.39	37.05	35.48	33.16	30.57	28.02	25.57	23.26	21.16	17.47	15.96	13.46	10.96
MOTORCYCLES (MCY)	0.44	0.80	0.75	0.79	0.80	0.80	0.81	0.82	0.82	0.83	0.85	0.85	0.86	0.87	0.90
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.76	0.71	0.64	0.64	0.64	0.63	0.63	0.61	0.56	0.54	0.54	0.53	0.52	0.51	0.51
HEAVY DUTY GAS URBAN BUSES (UB)	0.07	0.08	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
SCHOOL BUSES (SB)	0.68	0.73	0.68	0.70	0.71	0.71	0.71	0.70	0.70	0.69	0.69	0.68	0.67	0.65	0.63
OTHER BUSES (OB)	0.54	0.61	0.57	0.55	0.54	0.51	0.48	0.45	0.43	0.40	0.37	0.32	0.30	0.26	0.21
MOTOR HOMES (MH)	0.76	0.68	0.61	0.58	0.57	0.55	0.53	0.50	0.48	0.45	0.42	0.37	0.34	0.30	0.24
On-Road Subtotal	**104.87**	**99.52**	**96.24**	**86.32**	**82.07**	**76.83**	**71.32**	**66.03**	**61.02**	**56.36**	**52.09**	**44.39**	**41.15**	**35.76**	**29.90**
Other Mobile															
AIRCRAFT	1.64	1.83	1.88	1.98	2.04	2.14	2.21	2.28	2.36	2.43	2.61	2.71	2.76	2.88	3.03
TRAINS	12.18	10.16	9.56	9.03	8.90	8.51	8.83	8.96	9.02	9.08	9.15	9.31	9.40	9.59	9.91
SHIPS AND COMMERCIAL BOATS	2.01	1.88	1.82	1.69	1.63	1.57	1.50	1.44	1.37	1.31	1.24	1.19	1.16	1.11	1.12
RECREATIONAL BOATS	4.16	5.33	5.65	5.91	5.87	5.83	5.82	5.81	5.81	5.82	5.84	5.90	5.93	5.96	5.97
OFF-ROAD RECREATIONAL VEHICLES	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.16	0.17
OFF-ROAD EQUIPMENT	28.27	26.58	25.88	23.79	22.72	21.56	20.61	19.68	18.67	17.71	16.65	14.64	13.74	12.19	10.77
FARM EQUIPMENT	12.99	11.77	11.37	10.31	9.86	9.51	9.03	8.43	7.84	7.34	6.82	5.80	5.32	4.49	3.48
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**61.33**	**57.64**	**56.25**	**52.81**	**51.13**	**49.23**	**48.12**	**46.71**	**45.19**	**43.81**	**42.44**	**39.70**	**38.47**	**36.38**	**34.46**
Grand Total	**185.69**	**176.01**	**171.21**	**157.55**	**151.50**	**144.28**	**137.57**	**130.80**	**124.18**	**118.04**	**112.30**	**101.52**	**96.86**	**88.98**	**80.65**

NOX - SACNAA															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-10.92	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.08	-1.54	-1.18	-1.27	-1.16	-1.04	-0.93	-0.82	-0.72	-0.61	-0.52	-0.35	-0.28	-0.17	-0.07
Public Fleet	0.00	0.00	0.00	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	0.00
Idling	0.00	-0.29	-0.78	-1.77	-1.84	-1.92	-1.98	-2.04	-2.09	-2.15	-2.21	-2.30	-2.34	-2.40	-2.49
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01
Moyer	-0.19	-0.27	-0.21	-0.14	-0.17	-0.21	-0.24	-0.24	-0.24	-0.24	-0.22	-0.16	-0.12	0.00	0.00
Off-road	0.00	-0.04	-0.07	-0.26	-0.43	-0.77	-0.78	-0.81	-0.83	-0.78	-0.73	-0.61	-0.57	-0.48	-0.39
Ships	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Summary	**-0.26**	**-13.06**	**-2.24**	**-3.46**	**-3.64**	**-3.99**	**-3.97**	**-3.94**	**-3.92**	**-3.83**	**-3.72**	**-3.46**	**-3.34**	**-3.09**	**-2.99**

* These are already included in "Adjusted Baseline" sheets

and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - SACNAA - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.17	0.17	0.17	0.17	0.17	0.18	0.19	0.21	0.23	0.24	0.26	0.26	0.26	0.26	0.26
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION (COMBUSTION)	0.15	0.19	0.20	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
MANUFACTURING AND INDUSTRIAL	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
FOOD AND AGRICULTURAL PROCESSING	0.78	0.76	0.75	0.74	0.73	0.73	0.72	0.72	0.71	0.71	0.70	0.69	0.69	0.68	0.66
SERVICE AND COMMERCIAL	0.22	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25
OTHER (FUEL COMBUSTION)	0.13	0.12	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.05	0.05
SEWAGE TREATMENT	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LANDFILLS	0.36	0.36	0.36	0.36	0.37	0.37	0.37	0.38	0.39	0.39	0.40	0.41	0.42	0.43	0.45
INCINERATORS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SOIL REMEDIATION	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12
OTHER (WASTE DISPOSAL)	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LAUNDERING	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
DEGREASING	2.47	1.86	1.86	1.87	1.89	1.92	1.94	1.96	1.98	2.00	2.03	2.06	2.08	2.12	2.18
COATINGS AND RELATED PROCESS SOLVENTS	3.17	3.20	3.26	3.40	3.48	3.56	3.63	3.70	3.77	3.86	3.94	4.08	4.16	4.29	4.50
PRINTING	1.14	1.16	1.17	1.22	1.24	1.27	1.30	1.32	1.34	1.37	1.39	1.44	1.46	1.51	1.58
ADHESIVES AND SEALANTS	0.86	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.78	0.77	0.77	0.76	0.76	0.75	0.74
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
PETROLEUM MARKETING	4.18	4.30	4.37	4.39	4.43	4.49	4.57	4.66	4.74	4.82	4.91	5.09	5.18	5.35	5.63
OTHER (PETROLEUM PRODUCTION AND MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	2.09	1.98	2.06	2.16	2.20	2.26	2.32	2.37	2.42	2.48	2.52	2.61	2.66	2.75	2.89
FOOD AND AGRICULTURE	0.48	0.51	0.52	0.55	0.57	0.58	0.60	0.62	0.64	0.66	0.68	0.73	0.75	0.80	0.88
MINERAL PROCESSES	0.25	0.28	0.28	0.30	0.30	0.31	0.32	0.32	0.32	0.33	0.33	0.35	0.35	0.37	0.39
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.75	0.75	0.75	0.78	0.79	0.81	0.83	0.85	0.86	0.88	0.89	0.93	0.94	0.97	1.02
ELECTRONICS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**18.47**	**17.99**	**18.23**	**18.58**	**18.82**	**19.09**	**19.42**	**19.73**	**20.03**	**20.36**	**20.68**	**21.27**	**21.57**	**22.14**	**23.06**
Area-Wide															
CONSUMER PRODUCTS	14.76	13.57	13.62	13.26	13.43	13.59	13.77	13.94	14.12	14.29	14.47	14.86	15.05	15.44	16.03
ARCHITECTURAL COATINGS AND RELATED PROCESS	8.02	6.82	6.90	7.04	7.11	7.18	7.30	7.42	7.53	7.65	7.77	8.00	8.11	8.34	8.90
PESTICIDES/FERTILIZERS	1.80	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
ASPHALT PAVING / ROOFING	0.82	0.83	0.84	0.84	0.84	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.88	0.89
RESIDENTIAL FUEL COMBUSTION	1.18	1.21	1.21	1.23	1.23	1.24	1.25	1.26	1.27	1.27	1.28	1.30	1.31	1.34	1.37
FARMING OPERATIONS	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82	2.82
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
MANAGED BURNING AND DISPOSAL	1.30	1.29	1.28	1.27	1.27	1.27	1.26	1.26	1.25	1.25	1.24	1.23	1.23	1.22	1.20
COOKING	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15
Area-Wide Subtotal	**30.84**	**27.99**	**28.12**	**27.92**	**28.17**	**28.41**	**28.71**	**29.01**	**29.31**	**29.61**	**29.91**	**30.56**	**30.88**	**31.52**	**32.70**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	25.31	19.59	17.03	14.72	13.54	12.38	11.28	10.30	9.46	8.73	8.10	7.06	6.62	5.94	5.15
LIGHT DUTY TRUCKS - 1 (LDT1)	7.62	6.40	5.63	5.03	4.67	4.35	4.08	3.83	3.61	3.39	3.19	2.78	2.60	2.36	2.08
LIGHT DUTY TRUCKS - 2 (LDT2)	10.09	8.68	7.71	7.22	6.95	6.75	6.52	6.30	6.09	5.89	5.69	5.35	5.19	4.94	4.66
MEDIUM DUTY TRUCKS (MDV)	4.95	4.32	3.80	3.52	3.39	3.30	3.22	3.13	3.05	2.98	2.91	2.76	2.69	2.53	2.30
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.94	2.55	2.12	1.85	1.74	1.67	1.60	1.55	1.51	1.48	1.45	1.41	1.39	1.35	1.26
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.73	0.68	0.60	0.54	0.52	0.50	0.47	0.45	0.43	0.41	0.39	0.36	0.34	0.31	0.27
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.82	1.58	1.36	1.16	1.08	0.99	0.90	0.83	0.75	0.67	0.60	0.48	0.43	0.36	0.31
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.09	0.92	0.78	0.66	0.61	0.57	0.52	0.46	0.41	0.35	0.31	0.23	0.19	0.14	0.09
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.12	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.06	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.05
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.21	0.24	0.22	0.22	0.22	0.22	0.21	0.20	0.20	0.19	0.18	0.17	0.17	0.16	0.15
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	2.71	2.98	3.33	3.08	2.95	2.81	2.65	2.48	2.33	2.17	2.02	1.75	1.64	1.44	1.24
MOTORCYCLES (MCY)	2.59	4.00	3.53	3.41	3.39	3.36	3.32	3.31	3.31	3.31	3.34	3.35	3.37	3.42	3.50
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY DUTY GAS URBAN BUSES (UB)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
SCHOOL BUSES (SB)	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05
OTHER BUSES (OB)	0.15	0.13	0.11	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.05
MOTOR HOMES (MH)	0.28	0.21	0.18	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.08	0.06	0.05	0.04	0.03
On-Road Subtotal	**60.73**	**52.62**	**46.71**	**41.97**	**39.61**	**37.40**	**35.28**	**33.33**	**31.60**	**30.00**	**28.61**	**26.08**	**24.98**	**23.29**	**21.31**
Other Mobile															
AIRCRAFT	0.53	0.59	0.60	0.63	0.64	0.59	0.60	0.61	0.63	0.64	0.59	0.60	0.61	0.61	0.63
TRAINS	0.63	0.64	0.63	0.61	0.61	0.60	0.61	0.61	0.61	0.61	0.61	0.62	0.62	0.63	0.64
SHIPS AND COMMERCIAL BOATS	0.23	0.21	0.21	0.19	0.19	0.18	0.17	0.17	0.16	0.15	0.14	0.14	0.14	0.13	0.13
RECREATIONAL BOATS	19.05	19.52	19.20	18.40	17.94	17.54	17.22	16.97	16.77	16.60	16.47	16.30	16.25	16.19	16.40
OFF-ROAD RECREATIONAL VEHICLES	3.57	4.50	4.65	4.87	4.99	5.12	5.26	5.42	5.59	5.77	5.96	6.37	6.60	7.08	7.85
OFF-ROAD EQUIPMENT	13.11	13.52	12.75	11.62	11.11	10.59	10.10	9.65	9.23	8.84	8.51	7.87	7.63	7.26	7.30
FARM EQUIPMENT	2.67	2.46	2.35	2.10	2.00	1.92	1.81	1.67	1.53	1.41	1.29	1.08	0.98	0.83	0.70
FUEL STORAGE AND HANDLING	3.08	2.97	2.86	2.16	2.01	1.90	1.80	1.71	1.63	1.56	1.50	1.41	1.37	1.31	1.23
Other Mobile Subtotal	**42.87**	**44.41**	**43.24**	**40.58**	**39.48**	**38.44**	**37.58**	**36.81**	**36.14**	**35.59**	**35.08**	**34.39**	**34.19**	**34.03**	**34.87**
Grand Total	**152.91**	**143.00**	**136.30**	**129.06**	**126.08**	**123.34**	**121.00**	**118.88**	**117.09**	**115.56**	**114.29**	**112.30**	**111.63**	**110.98**	**111.94**

ROG - SACNAA															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-2.45	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.08	-0.79	-0.77	-0.72	-0.69	-0.67	-0.66	-0.64	-0.63	-0.62	-0.61	-0.58	-0.57	-0.55	-0.52
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.07	-0.07	-0.09	-0.12	-0.17	-0.19	-0.24	-0.31
Moyer	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.03	-0.04	-0.03	-0.03	-0.03	-0.02	-0.01	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.58	-0.58	-0.59	-0.60	-0.61	-0.61	-0.62	-0.63	-0.64	-0.65	-0.67	-0.70
Off-road	0.00	0.00	0.00	0.00	0.00	-0.03	-0.04	-0.05	-0.06	-0.07	-0.08	-0.09	-0.09	-0.10	-0.08
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.08**	**-3.24**	**-0.78**	**-1.32**	**-1.32**	**-1.35**	**-1.39**	**-1.45**	**-1.44**	**-1.46**	**-1.49**	**-1.53**	**-1.54**	**-1.57**	**-1.61**

* These are already included in "Adjusted Baseline" sheets

and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

San Diego County

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NOX - San Diego - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	2.42	2.11	2.26	3.58	3.72	4.09	4.09	4.09	4.09	4.09	4.09	4.37	4.51	4.80	5.22
COGENERATION	2.70	2.76	2.78	2.83	2.86	2.89	2.91	2.94	2.97	2.99	3.02	3.06	3.09	3.13	3.20
MANUFACTURING AND INDUSTRIAL	1.05	1.06	1.06	1.11	1.14	1.16	1.19	1.22	1.24	1.27	1.30	1.34	1.37	1.41	1.48
FOOD AND AGRICULTURAL PROCESSING	0.12	0.11	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.05	0.04
SERVICE AND COMMERCIAL	0.99	0.98	0.98	1.01	1.02	1.03	1.04	1.06	1.07	1.08	1.09	1.11	1.12	1.14	1.17
OTHER (FUEL COMBUSTION)	1.44	1.36	1.31	1.25	1.22	1.18	1.16	1.13	1.10	1.08	1.05	1.01	0.99	0.96	0.97
SEWAGE TREATMENT	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09
LANDFILLS	0.17	0.18	0.18	0.19	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.25
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (PETROLEUM PRODUCTION AND MARKETIN(	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.13	0.14	0.14	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.19
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.08	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10
Stationary Subtotal	9.19	8.85	8.97	10.38	10.55	10.96	11.00	11.05	11.09	11.13	11.18	11.55	11.74	12.11	12.73
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	1.64	1.67	1.68	1.70	1.71	1.72	1.73	1.74	1.75	1.76	1.77	1.79	1.81	1.83	1.86
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANAGED BURNING AND DISPOSAL	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	1.75	1.77	1.78	1.80	1.81	1.82	1.83	1.84	1.85	1.86	1.87	1.89	1.90	1.91	1.94

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	33.41	22.82	21.12	18.17	16.73	15.38	14.21	13.16	12.22	11.39	10.69	9.59	9.07	8.39	7.53
LIGHT DUTY TRUCKS - 1 (LDT1)	7.15	5.25	4.86	4.14	3.78	3.44	3.16	2.90	2.65	2.43	2.22	1.84	1.68	1.43	1.14
LIGHT DUTY TRUCKS - 2 (LDT2)	24.44	18.16	16.79	14.45	13.43	12.53	11.72	10.92	10.17	9.45	8.78	7.59	7.07	6.18	5.14
MEDIUM DUTY TRUCKS (MDV)	10.91	9.23	8.58	7.35	6.81	6.33	5.96	5.61	5.26	4.93	4.61	4.02	3.75	3.26	2.64
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	4.14	3.66	3.46	3.20	3.07	2.94	2.86	2.80	2.75	2.70	2.65	2.58	2.54	2.48	2.37
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.56	0.55	0.54	0.54	0.53	0.52	0.52	0.51	0.50	0.49	0.49	0.47	0.46	0.45	0.42
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.37	1.28	1.23	1.12	1.07	1.01	0.96	0.90	0.84	0.78	0.73	0.62	0.58	0.50	0.40
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.62	1.53	1.42	1.19	1.09	0.99	0.91	0.83	0.75	0.67	0.61	0.49	0.45	0.37	0.28
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.11	3.24	3.01	2.54	2.39	2.18	2.02	1.90	1.80	1.72	1.64	1.47	1.39	1.25	1.05
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	1.27	1.87	1.80	1.62	1.56	1.46	1.37	1.28	1.21	1.13	1.06	0.92	0.86	0.75	0.60
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	11.58	12.63	12.17	10.92	10.33	9.57	8.84	8.12	7.44	6.79	6.18	5.11	4.64	3.85	2.99
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	27.45	26.47	26.36	25.01	24.81	24.38	22.84	21.25	19.69	18.28	16.97	14.79	13.89	12.40	10.72
MOTORCYCLES (MCY)	0.61	1.16	1.18	1.16	1.15	1.13	1.13	1.13	1.13	1.13	1.13	1.14	1.15	1.17	1.20
HEAVY DUTY DIESEL URBAN BUSES (UB)	2.31	2.13	2.12	2.09	2.08	2.07	2.07	2.03	1.96	1.96	1.95	1.93	1.91	1.84	1.81
HEAVY DUTY GAS URBAN BUSES (UB)	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
SCHOOL BUSES (SB)	1.16	1.24	1.24	1.23	1.23	1.23	1.23	1.22	1.22	1.22	1.21	1.19	1.18	1.17	1.13
OTHER BUSES (OB)	0.95	0.93	0.91	0.85	0.82	0.77	0.72	0.68	0.63	0.59	0.54	0.47	0.43	0.37	0.30
MOTOR HOMES (MH)	1.49	1.31	1.25	1.10	1.04	0.97	0.90	0.84	0.79	0.73	0.68	0.59	0.55	0.47	0.37
On-Road Subtotal	130.60	113.51	108.10	96.77	91.98	86.97	81.49	76.15	71.08	66.47	62.23	54.90	51.69	46.41	40.17
Other Mobile															
AIRCRAFT	5.01	5.31	5.39	5.54	5.62	5.70	5.77	5.84	5.90	5.97	6.04	6.14	6.20	6.30	6.46
TRAINS	1.38	1.36	1.35	1.26	1.20	1.12	1.46	1.58	1.61	1.64	1.67	1.73	1.76	1.82	1.95
SHIPS AND COMMERCIAL BOATS	29.34	30.31	30.71	31.52	32.11	32.81	33.60	34.55	35.64	36.93	38.04	42.24	44.76	50.95	64.49
RECREATIONAL BOATS	4.80	6.13	6.49	6.79	6.75	6.72	6.71	6.71	6.72	6.74	6.77	6.85	6.89	6.94	6.98
OFF-ROAD RECREATIONAL VEHICLES	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.10	0.10
OFF-ROAD EQUIPMENT	44.51	41.37	40.21	36.64	34.77	32.64	31.12	29.56	27.94	26.44	24.76	21.77	20.42	18.09	15.70
FARM EQUIPMENT	5.32	4.68	4.47	3.98	3.78	3.61	3.39	3.12	2.86	2.64	2.42	2.01	1.83	1.52	1.14
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	90.44	89.24	88.69	85.81	84.30	82.68	82.12	81.43	80.76	80.44	79.78	80.84	81.95	85.73	96.82
Grand Total	231.96	213.37	207.54	194.76	188.63	182.43	176.43	170.46	164.78	159.91	155.06	149.17	147.27	146.16	151.67

NOX - San Diego															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-7.83	-6.48	-3.34	-1.72	0	0	0	0	0	0	0	0	0	0
Reflash	-0.06	-1.13	-0.78	-0.88	-0.83	-0.79	-0.71	-0.63	-0.56	-0.49	-0.43	-0.30	-0.25	-0.16	-0.07
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	0.00
Idling	0.00	-0.21	-0.50	-1.19	-1.29	-1.41	-1.48	-1.54	-1.61	-1.69	-1.77	-1.95	-2.03	-2.21	-2.44
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.03
Moyer	-0.25	-0.39	-0.28	-0.18	-0.23	-0.28	-0.33	-0.33	-0.33	-0.33	-0.30	-0.24	-0.17	0.00	0.00
Off-road	0.00	-0.09	-0.14	-0.50	-0.83	-1.56	-1.56	-1.62	-1.66	-1.56	-1.46	-1.27	-1.20	-1.09	-0.88
Ships	0.00	0.00	0.00	-0.18	-0.20	-0.22	-0.25	-0.28	-0.31	-0.34	-0.38	-0.48	-0.54	-0.68	-0.97
Summary	**-0.32**	**-9.65**	**-8.17**	**-6.30**	**-5.12**	**-4.28**	**-4.35**	**-4.43**	**-4.50**	**-4.45**	**-4.37**	**-4.26**	**-4.22**	**-4.16**	**-4.39**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - San Diego - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.43	0.36	0.40	0.70	0.74	0.82	0.82	0.82	0.82	0.82	0.82	0.89	0.92	0.98	1.08
COGENERATION	1.75	1.79	1.81	1.84	1.86	1.88	1.89	1.91	1.93	1.94	1.96	1.99	2.01	2.04	2.08
MANUFACTURING AND INDUSTRIAL	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
FOOD AND AGRICULTURAL PROCESSING	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SERVICE AND COMMERCIAL	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.19
OTHER (FUEL COMBUSTION)	0.18	0.16	0.16	0.14	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09
SEWAGE TREATMENT	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
LANDFILLS	1.66	1.73	1.76	1.83	1.86	1.89	1.93	1.96	1.99	2.03	2.06	2.12	2.15	2.21	2.30
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.23	0.24	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.29
LAUNDERING	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
DEGREASING	1.64	1.68	1.69	1.72	1.74	1.77	1.80	1.82	1.85	1.88	1.90	1.95	1.97	2.01	2.08
COATINGS AND RELATED PROCESS SOLVENTS	6.20	6.51	6.60	6.97	7.15	7.33	7.51	7.68	7.86	8.03	8.21	8.51	8.66	8.96	9.41
PRINTING	3.76	3.89	3.91	4.08	4.16	4.25	4.34	4.42	4.51	4.60	4.68	4.85	4.93	5.09	5.33
ADHESIVES AND SEALANTS	3.06	2.85	2.78	2.64	2.57	2.49	2.44	2.38	2.33	2.27	2.21	2.12	2.08	1.98	1.85
OTHER (CLEANING AND SURFACE COATINGS)	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.15	0.16
PETROLEUM MARKETING	8.07	8.28	8.30	8.50	8.60	8.78	8.95	9.13	9.30	9.48	9.65	9.99	10.15	10.48	10.98
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	1.32	1.48	1.53	1.61	1.66	1.70	1.74	1.78	1.83	1.87	1.91	1.98	2.02	2.09	2.21
FOOD AND AGRICULTURE	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
MINERAL PROCESSES	0.14	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.22
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.56	0.61	0.63	0.66	0.68	0.70	0.72	0.74	0.75	0.77	0.79	0.82	0.84	0.87	0.91
Stationary Subtotal	29.56	30.31	30.53	31.70	32.18	32.80	33.33	33.86	34.39	34.91	35.44	36.47	36.99	38.02	39.59
Area-Wide															
CONSUMER PRODUCTS	21.94	19.69	19.71	19.12	19.33	19.52	19.73	19.94	20.15	20.35	20.56	20.98	21.18	21.60	22.22
ARCHITECTURAL COATINGS AND RELATED PROC	11.98	10.26	10.37	10.54	10.63	10.72	10.82	10.91	11.01	11.10	11.20	11.43	11.54	11.77	12.11
PESTICIDES/FERTILIZERS	1.18	1.04	0.98	0.87	0.82	0.77	0.76	0.75	0.74	0.72	0.71	0.69	0.68	0.66	0.64
ASPHALT PAVING / ROOFING	1.78	1.79	1.80	1.81	1.81	1.82	1.83	1.83	1.84	1.85	1.85	1.86	1.86	1.87	1.88
RESIDENTIAL FUEL COMBUSTION	0.32	0.33	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.36	0.37
FARMING OPERATIONS	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
MANAGED BURNING AND DISPOSAL	0.28	0.27	0.27	0.26	0.26	0.26	0.26	0.25	0.25	0.25	0.25	0.24	0.24	0.23	0.22
COOKING	1.82	1.92	1.94	2.00	2.03	2.06	2.10	2.13	2.16	2.20	2.23	2.29	2.32	2.39	2.48
Area-Wide Subtotal	40.72	36.72	36.82	36.36	36.65	36.92	37.25	37.58	37.91	38.24	38.57	39.27	39.61	40.30	41.34

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	37.93	27.69	25.36	21.43	19.68	17.99	16.59	15.31	14.27	13.36	12.60	11.43	10.91	10.17	9.32
LIGHT DUTY TRUCKS - 1 (LDT1)	6.70	5.30	4.89	4.18	3.82	3.48	3.23	3.01	2.81	2.61	2.43	2.11	1.97	1.81	1.62
LIGHT DUTY TRUCKS - 2 (LDT2)	13.81	11.14	10.49	9.54	9.20	8.93	8.67	8.38	8.12	7.85	7.59	7.10	6.87	6.51	6.10
MEDIUM DUTY TRUCKS (MDV)	5.86	5.00	4.69	4.19	4.00	3.84	3.74	3.64	3.54	3.44	3.34	3.14	3.04	2.83	2.55
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	4.03	3.33	3.00	2.50	2.31	2.15	2.04	1.95	1.88	1.82	1.77	1.67	1.62	1.53	1.37
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.60	0.56	0.52	0.45	0.42	0.39	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.20
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.38	1.13	1.02	0.85	0.78	0.71	0.65	0.59	0.53	0.47	0.42	0.35	0.32	0.27	0.22
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.66	0.62	0.56	0.46	0.42	0.38	0.35	0.31	0.28	0.25	0.23	0.18	0.16	0.13	0.09
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.08
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.06	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.22	0.27	0.27	0.27	0.26	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	2.15	2.08	2.04	1.96	1.93	1.90	1.80	1.69	1.59	1.49	1.40	1.26	1.20	1.10	0.99
MOTORCYCLES (MCY)	2.97	4.78	4.67	4.41	4.26	4.14	4.08	4.02	3.98	3.95	3.94	3.94	3.95	4.00	4.04
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08
HEAVY DUTY GAS URBAN BUSES (UB)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
SCHOOL BUSES (SB)	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.08	0.08
OTHER BUSES (OB)	0.18	0.15	0.15	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.10	0.09	0.08	0.08	0.06
MOTOR HOMES (MH)	0.56	0.43	0.39	0.31	0.27	0.25	0.22	0.19	0.17	0.15	0.13	0.10	0.08	0.06	0.04
On-Road Subtotal	77.35	62.92	58.48	51.10	47.89	44.94	42.51	40.19	38.22	36.40	34.82	32.19	31.00	29.23	27.08
Other Mobile															
AIRCRAFT	3.19	3.22	3.23	3.24	3.25	3.25	3.26	3.27	3.27	3.28	3.28	3.29	3.30	3.31	3.32
TRAINS	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
SHIPS AND COMMERCIAL BOATS	1.94	1.89	1.87	1.82	1.81	1.79	1.77	1.76	1.76	1.76	1.72	1.81	1.86	2.00	2.36
RECREATIONAL BOATS	19.16	19.11	18.76	17.89	17.38	16.95	16.60	16.31	16.08	15.89	15.74	15.52	15.45	15.36	15.51
OFF-ROAD RECREATIONAL VEHICLES	2.45	2.99	2.97	3.02	3.06	3.12	3.19	3.27	3.36	3.46	3.57	3.81	3.95	4.23	4.67
OFF-ROAD EQUIPMENT	21.09	21.59	20.39	18.65	17.87	17.12	16.37	15.68	15.04	14.44	13.92	13.03	12.72	12.28	12.30
FARM EQUIPMENT	1.09	0.98	0.93	0.83	0.79	0.75	0.70	0.64	0.58	0.53	0.48	0.40	0.36	0.30	0.25
FUEL STORAGE AND HANDLING	4.52	4.24	4.05	2.96	2.73	2.55	2.39	2.25	2.12	2.01	1.91	1.76	1.70	1.59	1.46
Other Mobile Subtotal	53.51	54.11	52.26	48.50	46.96	45.61	44.36	43.27	42.30	41.45	40.71	39.70	39.41	39.14	39.94
Grand Total	201.14	184.06	178.10	167.65	163.69	160.28	157.45	154.89	152.81	151.00	149.54	147.62	147.01	146.69	147.95

ROG - San Diego															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.59	-0.48	-0.24	-0.12	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.01	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.10	-0.09	-0.12	-0.15	-0.22	-0.25	-0.32	-0.43
Moyer	0.00	0.00	-0.01	-0.02	-0.03	-0.04	-0.05	-0.06	-0.05	-0.05	-0.04	-0.03	-0.02	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.83	-0.84	-0.85	-0.86	-0.87	-0.88	-0.89	-0.90	-0.91	-0.92	-0.94	-0.97
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.05	-0.07	-0.09	-0.10	-0.13	-0.14	-0.16	-0.12
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.01**	**-0.56**	**-0.46**	**-1.09**	**-0.99**	**-0.89**	**-0.96**	**-1.07**	**-1.08**	**-1.14**	**-1.19**	**-1.29**	**-1.33**	**-1.41**	**-1.50**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

South Coast Air Basin

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NOX - SC - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	5.12	8.64	8.68	7.83	7.51	6.92	6.56	6.57	6.58	6.59	6.59	6.62	6.63	6.66	6.66
COGENERATION	0.58	0.59	0.56	0.48	0.47	0.45	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48
OIL AND GAS PRODUCTION (COMBUSTION)	1.23	0.90	0.88	0.79	0.77	0.68	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
PETROLEUM REFINING (COMBUSTION)	7.07	7.09	7.07	6.11	5.89	5.78	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73
MANUFACTURING AND INDUSTRIAL	17.39	17.64	17.04	16.07	15.84	15.40	15.12	15.04	14.95	14.87	14.85	14.94	14.97	15.05	15.27
FOOD AND AGRICULTURAL PROCESSING	2.14	1.88	1.20	1.15	1.11	1.08	1.05	1.03	1.01	0.99	0.97	0.94	0.93	0.90	0.87
SERVICE AND COMMERCIAL	17.32	17.16	16.49	15.34	14.88	13.66	13.21	12.65	12.12	11.61	11.32	11.12	11.01	10.79	10.82
OTHER (FUEL COMBUSTION)	8.02	7.23	6.95	6.36	6.09	5.75	5.57	5.38	5.20	5.01	4.83	4.56	4.42	4.16	4.16
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.63	0.65	0.65	0.67	0.68	0.69	0.70	0.71	0.71	0.72	0.73	0.74	0.74	0.76	0.77
INCINERATORS	1.53	1.62	1.64	1.63	1.63	1.63	1.60	1.60	1.61	1.61	1.62	1.63	1.64	1.66	1.69
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.14	0.15	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20
OIL AND GAS PRODUCTION	0.05	0.25	0.37	0.33	0.32	0.30	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
PETROLEUM REFINING	4.86	4.98	5.11	4.52	4.37	4.36	4.38	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19
PETROLEUM MARKETING	0.05	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.09	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
FOOD AND AGRICULTURE	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MINERAL PROCESSES	1.21	0.91	0.82	0.79	0.78	0.79	0.79	0.79	0.79	0.80	0.80	0.80	0.80	0.80	0.81
METAL PROCESSES	0.36	0.36	0.28	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.71	0.75	0.86	0.85	0.83	0.82	0.81	0.81	0.82	0.82	0.82	0.82	0.82	0.82	0.83
Stationary Subtotal	**68.61**	**71.02**	**68.97**	**63.47**	**61.73**	**58.87**	**57.45**	**56.44**	**55.65**	**54.88**	**54.39**	**54.05**	**53.86**	**53.49**	**53.79**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PRO(	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	20.47	19.39	17.92	18.02	18.16	15.18	15.29	15.40	15.51	15.62	13.81	13.97	14.01	14.27	14.32
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
MANAGED BURNING AND DISPOSAL	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**20.65**	**19.58**	**18.10**	**18.20**	**18.34**	**15.36**	**15.47**	**15.58**	**15.69**	**15.80**	**14.00**	**14.15**	**14.20**	**14.45**	**14.50**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	140.22	96.65	83.47	65.85	59.61	53.85	48.75	44.22	40.15	36.50	33.30	27.93	25.68	22.09	17.69
LIGHT DUTY TRUCKS - 1 (LDT1)	27.64	20.45	17.94	14.50	13.26	12.07	11.08	10.19	9.35	8.57	7.83	6.53	5.95	5.09	4.08
LIGHT DUTY TRUCKS - 2 (LDT2)	93.68	74.40	64.98	52.52	48.60	45.11	42.28	39.64	37.12	34.73	32.46	28.39	26.56	23.40	19.61
MEDIUM DUTY TRUCKS (MDV)	49.31	42.58	37.81	31.02	28.88	27.01	25.53	24.05	22.61	21.22	19.89	17.41	16.26	14.16	11.51
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	25.82	22.58	18.78	15.40	14.97	14.59	14.23	13.95	13.68	13.43	13.21	12.70	12.47	12.10	11.44
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	3.86	3.88	3.38	2.95	2.91	2.86	2.80	2.76	2.71	2.66	2.61	2.49	2.43	2.33	2.19
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	7.61	7.38	6.24	5.05	4.85	4.62	4.38	4.14	3.89	3.66	3.43	2.98	2.77	2.42	1.99
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	9.09	8.91	7.56	6.10	5.78	5.42	5.04	4.65	4.25	3.90	3.56	2.90	2.61	2.14	1.66
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.64	13.80	11.69	9.17	9.00	8.40	7.85	7.44	7.12	6.83	6.56	6.02	5.74	5.25	4.54
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	8.39	10.90	9.39	7.62	7.43	6.96	6.50	6.11	5.77	5.42	5.11	4.55	4.26	3.75	3.10
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	70.86	76.44	64.84	51.89	49.52	46.03	42.19	38.87	35.72	32.63	29.89	25.36	23.18	19.49	15.27
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	147.23	158.52	173.47	139.38	134.71	127.08	119.10	110.89	102.55	94.81	87.37	73.26	67.55	58.23	49.69
MOTORCYCLES (MCY)	1.65	3.14	3.12	3.06	3.04	3.02	3.03	3.06	3.09	3.12	3.15	3.18	3.21	3.28	3.22
HEAVY DUTY DIESEL URBAN BUSES (UB)	12.83	11.53	11.23	11.01	10.89	10.80	10.74	10.62	10.28	10.15	10.00	9.57	9.13	8.50	8.23
HEAVY DUTY GAS URBAN BUSES (UB)	0.89	0.74	0.76	0.77	0.77	0.78	0.78	0.79	0.81	0.83	0.84	0.84	0.85	0.88	0.89
SCHOOL BUSES (SB)	4.22	4.08	4.10	4.11	4.13	4.14	4.14	4.14	4.14	4.14	4.15	4.15	4.15	4.13	4.08
OTHER BUSES (OB)	3.55	3.86	3.74	3.31	3.11	2.82	2.57	2.36	2.17	2.00	1.86	1.64	1.53	1.33	1.08
MOTOR HOMES (MH)	3.80	3.36	3.20	2.88	2.73	2.55	2.36	2.21	2.06	1.91	1.78	1.55	1.44	1.25	1.02
On-Road Subtotal	**611.29**	**563.20**	**525.72**	**426.62**	**404.19**	**378.12**	**353.37**	**330.09**	**307.50**	**286.50**	**266.99**	**231.44**	**215.78**	**189.83**	**161.30**
Other Mobile															
AIRCRAFT	13.28	15.37	16.08	17.48	18.18	18.97	19.74	20.53	21.30	22.09	22.86	24.42	25.20	26.75	29.47
TRAINS	37.91	32.26	30.60	28.95	28.43	19.69	21.13	21.87	22.30	22.75	23.22	24.20	24.72	25.82	27.63
SHIPS AND COMMERCIAL BOATS	63.77	72.65	74.46	76.52	78.39	80.31	81.55	82.93	84.73	86.69	88.78	94.24	97.18	103.72	116.04
RECREATIONAL BOATS	11.61	15.11	16.09	16.96	16.91	16.89	16.90	16.95	17.02	17.13	17.26	17.59	17.76	18.01	18.32
OFF-ROAD RECREATIONAL VEHICLES	0.22	0.18	0.18	0.17	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.23
OFF-ROAD EQUIPMENT	240.90	220.12	213.18	193.26	183.93	173.23	164.79	156.16	147.24	138.56	129.17	113.62	106.68	94.69	81.36
FARM EQUIPMENT	10.44	9.36	9.01	8.11	7.74	7.24	6.84	6.34	5.85	5.44	5.03	4.25	3.89	3.26	2.49
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**378.12**	**365.05**	**359.60**	**341.45**	**333.74**	**316.49**	**311.11**	**304.94**	**298.63**	**292.85**	**286.52**	**278.52**	**275.62**	**272.47**	**275.53**
Grand Total	**1078.68**	**1018.85**	**972.39**	**849.74**	**818.00**	**768.83**	**737.40**	**707.04**	**677.46**	**650.03**	**621.89**	**578.16**	**559.45**	**530.25**	**505.11**

NOX - SC															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-46.94	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.54	-6.88	-8.46	-7.99	-7.36	-6.72	-6.06	-5.42	-4.80	-4.18	-3.59	-2.43	-1.94	-1.19	-0.53
Public Fleet	0.00	0.00	-0.02	-0.10	-0.14	-0.18	-0.17	-0.16	-0.15	-0.13	-0.12	-0.10	-0.09	-0.06	-0.03
Idling	0.00	-1.05	-2.84	-5.83	-6.12	-6.42	-6.73	-7.04	-7.38	-7.72	-8.08	-8.49	-8.69	-9.06	-9.84
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.02	-0.03	-0.04	-0.05	-0.06	-0.07	-0.09
Moyer	-2.30	-3.06	-2.59	-1.65	-2.09	-2.52	-2.94	-2.94	-2.94	-2.94	-2.63	-2.01	-1.43	0.00	0.00
Off-road	0.00	-0.09	-0.14	-0.59	-0.94	-3.98	-3.98	-4.04	-4.07	-3.99	-3.92	-3.82	-3.80	-3.85	-3.97
Ships	0.00	0.00	0.00	-1.79	-1.88	-2.01	-2.08	-2.16	-2.26	-2.37	-2.48	-2.71	-2.83	-3.10	-3.57
Summary	**-2.84**	**-58.03**	**-14.04**	**-17.94**	**-18.54**	**-21.83**	**-21.99**	**-21.76**	**-21.63**	**-21.37**	**-20.85**	**-19.60**	**-18.83**	**-17.34**	**-18.05**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - SC - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	1.75	1.36	1.50	1.71	1.48	1.34	1.35	1.37	1.38	1.39	1.41	1.46	1.48	1.54	1.54
COGENERATION	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10
OIL AND GAS PRODUCTION (COMBUSTION)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
PETROLEUM REFINING (COMBUSTION)	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
MANUFACTURING AND INDUSTRIAL	1.70	1.76	1.82	1.89	1.93	1.97	1.98	2.00	2.02	2.04	2.06	2.10	2.11	2.14	2.19
FOOD AND AGRICULTURAL PROCESSING	0.17	0.15	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SERVICE AND COMMERCIAL	1.30	1.34	1.38	1.41	1.42	1.43	1.44	1.45	1.46	1.48	1.49	1.50	1.51	1.52	1.56
OTHER (FUEL COMBUSTION)	0.88	0.79	0.76	0.68	0.64	0.61	0.58	0.55	0.52	0.49	0.47	0.43	0.41	0.37	0.37
SEWAGE TREATMENT	0.30	0.32	0.32	0.33	0.34	0.34	0.35	0.35	0.35	0.36	0.36	0.37	0.37	0.38	0.39
LANDFILLS	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12
INCINERATORS	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12
OTHER (WASTE DISPOSAL)	7.15	7.63	7.76	7.11	6.76	6.86	6.94	7.03	7.11	7.19	7.27	7.43	7.51	7.66	7.88
LAUNDERING	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.22
DEGREASING	19.54	8.45	8.58	9.00	9.25	9.50	9.58	9.66	9.74	9.83	9.91	10.14	10.25	10.48	10.86
COATINGS AND RELATED PROCESS SOLVENTS	28.83	27.25	26.50	23.20	23.72	24.09	24.42	24.75	25.08	25.41	25.74	26.35	26.65	27.26	28.27
PRINTING	6.29	6.28	4.46	4.57	4.62	4.67	4.71	4.74	4.78	4.81	4.85	4.94	4.99	5.08	5.24
ADHESIVES AND SEALANTS	3.44	3.18	3.33	3.62	3.76	3.91	3.97	4.04	4.11	4.18	4.24	4.37	4.43	4.55	4.76
OTHER (CLEANING AND SURFACE COATINGS)	1.39	0.63	0.64	0.68	0.70	0.71	0.72	0.73	0.74	0.75	0.75	0.77	0.78	0.80	0.82
OIL AND GAS PRODUCTION	2.50	1.35	1.14	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PETROLEUM REFINING	4.69	3.81	3.81	3.75	3.73	3.73	3.73	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
PETROLEUM MARKETING	27.81	27.33	27.34	27.05	26.97	27.19	27.41	27.64	27.87	28.10	28.33	28.88	29.15	29.69	30.52
OTHER (PETROLEUM PRODUCTION AND MARKET	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHEMICAL	12.43	10.34	10.72	10.83	11.05	11.44	11.66	11.87	12.09	12.30	12.52	12.93	13.14	13.56	14.26
FOOD AND AGRICULTURE	2.77	2.76	2.78	2.82	2.84	2.86	2.88	2.90	2.92	2.94	2.97	3.03	3.07	3.13	3.22
MINERAL PROCESSES	0.37	0.37	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.40
METAL PROCESSES	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07
WOOD AND PAPER	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.10	0.10
GLASS AND RELATED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ELECTRONICS	0.06	0.08	0.08	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12
OTHER (INDUSTRIAL PROCESSES)	7.82	8.22	8.32	8.03	8.09	8.18	8.26	8.33	8.40	8.48	8.55	8.69	8.76	8.90	9.09
Stationary Subtotal	**133.40**	**115.61**	**113.96**	**110.33**	**110.99**	**112.53**	**113.63**	**114.66**	**115.82**	**117.00**	**118.18**	**120.65**	**121.88**	**124.36**	**128.29**
Area-Wide															
CONSUMER PRODUCTS	110.40	100.70	100.78	97.55	98.50	99.32	100.14	100.97	101.79	102.63	103.46	105.03	105.82	107.38	109.54
ARCHITECTURAL COATINGS AND RELATED PROC	57.30	45.74	30.70	26.70	27.00	27.29	27.60	27.91	28.23	28.54	28.85	29.49	29.81	30.44	31.32
PESTICIDES/FERTILIZERS	1.93	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
ASPHALT PAVING / ROOFING	0.90	1.00	1.03	1.09	1.12	1.14	1.17	1.20	1.23	1.26	1.29	1.33	1.36	1.40	1.48
RESIDENTIAL FUEL COMBUSTION	1.47	1.43	1.50	1.51	1.52	1.53	1.54	1.56	1.57	1.58	1.59	1.61	1.62	1.67	1.67
FARMING OPERATIONS	9.87	7.55	6.39	5.65	5.46	4.75	4.58	4.43	4.30	4.18	4.06	3.87	3.79	3.64	3.47
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
MANAGED BURNING AND DISPOSAL	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
COOKING	1.80	1.85	1.88	1.94	1.97	1.99	2.02	2.05	2.07	2.10	2.12	2.16	2.18	2.22	2.28
Area-Wide Subtotal	**184.15**	**160.66**	**144.67**	**136.82**	**137.94**	**138.40**	**139.44**	**140.50**	**141.57**	**142.66**	**143.76**	**145.88**	**146.95**	**149.14**	**152.14**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	178.75	132.83	114.21	89.26	81.04	73.37	67.03	61.52	56.61	52.40	48.79	42.88	40.25	36.08	30.91
LIGHT DUTY TRUCKS - 1 (LDT1)	30.28	24.64	21.56	17.31	15.75	14.28	13.30	12.40	11.51	10.69	9.96	8.62	8.01	7.34	6.52
LIGHT DUTY TRUCKS - 2 (LDT2)	60.44	52.48	46.60	39.25	37.38	35.85	34.74	33.77	32.73	31.77	30.88	29.27	28.46	27.19	25.64
MEDIUM DUTY TRUCKS (MDV)	30.86	27.20	24.41	20.86	19.97	19.25	18.85	18.40	17.89	17.46	17.01	16.14	15.69	14.72	13.35
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	18.48	16.22	13.07	9.87	9.35	8.95	8.65	8.35	8.06	7.82	7.59	7.14	6.93	6.49	5.82
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	2.89	2.85	2.35	1.82	1.73	1.64	1.56	1.49	1.43	1.36	1.30	1.19	1.13	1.04	0.91
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	7.53	6.38	5.09	3.69	3.38	3.10	2.84	2.60	2.38	2.17	1.99	1.66	1.51	1.31	1.12
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	4.34	4.18	3.49	2.74	2.60	2.40	2.20	1.96	1.72	1.57	1.40	1.11	0.98	0.78	0.56
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.25	0.23	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.20	0.20	0.20	0.19
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.20	0.26	0.23	0.20	0.20	0.20	0.20	0.19	0.19	0.18	0.18	0.17	0.16	0.15	0.13
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.12	1.36	1.19	1.01	0.99	0.97	0.95	0.93	0.90	0.87	0.85	0.80	0.78	0.74	0.71
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	12.56	13.83	15.23	12.60	12.11	11.55	11.03	10.41	9.76	9.15	8.54	7.38	6.88	6.04	5.31
MOTORCYCLES (MCY)	9.60	14.99	14.10	12.87	12.49	12.19	11.98	11.92	11.92	11.88	11.92	11.95	12.01	12.21	11.99
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.44	0.41	0.40	0.39	0.39	0.38	0.38	0.38	0.37	0.37	0.36	0.35	0.34	0.32	0.31
HEAVY DUTY GAS URBAN BUSES (UB)	0.55	0.50	0.52	0.50	0.48	0.49	0.50	0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.58
SCHOOL BUSES (SB)	0.34	0.31	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.26
OTHER BUSES (OB)	0.64	0.62	0.56	0.48	0.44	0.41	0.39	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.22
MOTOR HOMES (MH)	1.26	0.97	0.88	0.69	0.61	0.54	0.49	0.44	0.38	0.34	0.30	0.22	0.19	0.14	0.10
On-Road Subtotal	**360.29**	**300.29**	**264.42**	**214.02**	**199.41**	**186.08**	**175.59**	**166.11**	**157.20**	**149.36**	**142.39**	**130.18**	**124.64**	**115.84**	**104.63**
Other Mobile															
AIRCRAFT	6.41	7.29	7.59	8.17	8.46	8.77	9.09	9.41	9.73	10.05	10.38	11.02	11.34	11.99	13.13
TRAINS	2.51	2.55	2.52	2.47	2.45	2.45	2.47	2.48	2.49	2.50	2.51	2.54	2.56	2.60	2.66
SHIPS AND COMMERCIAL BOATS	3.60	3.67	3.64	3.59	3.57	3.54	3.50	3.47	3.45	3.43	3.43	3.54	3.61	3.76	4.12
RECREATIONAL BOATS	67.89	65.56	64.08	60.62	58.66	56.99	55.61	54.48	53.55	52.78	52.13	51.15	50.80	50.29	50.82
OFF-ROAD RECREATIONAL VEHICLES	7.38	9.08	8.90	8.96	9.03	9.16	9.33	9.54	9.76	10.03	10.31	10.97	11.34	12.12	13.40
OFF-ROAD EQUIPMENT	105.99	104.94	98.57	89.04	84.74	80.64	76.87	73.39	70.23	67.31	64.80	60.86	59.54	57.74	56.78
FARM EQUIPMENT	2.16	1.99	1.90	1.69	1.61	1.54	1.45	1.34	1.22	1.12	1.02	0.85	0.77	0.65	0.54
FUEL STORAGE AND HANDLING	23.43	22.21	21.13	15.33	14.08	13.09	12.21	11.42	10.74	10.15	9.62	8.79	8.45	7.86	7.14
Other Mobile Subtotal	**219.38**	**217.30**	**208.31**	**189.88**	**182.60**	**176.19**	**170.52**	**165.52**	**161.17**	**157.37**	**154.21**	**149.72**	**148.42**	**147.01**	**148.59**
Grand Total	**897.22**	**793.86**	**731.36**	**651.05**	**630.94**	**613.19**	**599.18**	**586.79**	**575.76**	**566.38**	**558.53**	**546.43**	**541.89**	**536.35**	**533.65**

ROG - SC															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-3.90	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.07	-0.01	0.01	0.03	0.04	0.05	0.00	-0.05	-0.10	-0.15	-0.20	-0.30	-0.34	-0.44	-0.60
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.02	-0.08	-0.11	-0.14	-0.13	-0.12	-0.11	-0.11	-0.10	-0.07	-0.06	-0.04	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.11	0.00	-0.34	-0.45	-0.56	-0.78	-0.89	-1.12	-1.45
Moyer	0.00	0.00	-0.04	-0.13	-0.20	-0.25	-0.31	-0.31	-0.31	-0.31	-0.28	-0.22	-0.13	0.00	0.00
Consumer Products	0.00	0.00	0.00	-4.25	-4.29	-4.32	-4.36	-4.40	-4.43	-4.47	-4.50	-4.57	-4.61	-4.67	-4.77
Off-Road	0.00	0.00	0.00	0.00	0.00	-0.07	-0.15	-0.23	-0.30	-0.37	-0.43	-0.52	-0.56	-0.63	-0.48
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.07**	**-3.91**	**-0.06**	**-4.43**	**-4.56**	**-4.74**	**-5.07**	**-5.11**	**-5.60**	**-5.85**	**-6.07**	**-6.47**	**-6.60**	**-6.90**	**-7.31**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

PM2.5 - SC - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	1.41	1.09	1.20	1.37	1.18	1.07	1.08	1.09	1.10	1.11	1.12	1.17	1.19	1.23	1.23
COGENERATION	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
OIL AND GAS PRODUCTION (COMBUSTION)	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
PETROLEUM REFINING (COMBUSTION)	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
MANUFACTURING AND INDUSTRIAL	1.21	1.28	1.33	1.27	1.31	1.34	1.35	1.37	1.39	1.41	1.42	1.45	1.47	1.50	1.55
FOOD AND AGRICULTURAL PROCESSING	0.18	0.16	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
SERVICE AND COMMERCIAL	1.48	1.49	1.54	1.54	1.55	1.55	1.55	1.55	1.55	1.54	1.54	1.53	1.52	1.51	1.51
OTHER (FUEL COMBUSTION)	0.34	0.31	0.29	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.21	0.19	0.18	0.17	0.17
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.35	0.36	0.36	0.37	0.37	0.37	0.38	0.38	0.38	0.39	0.39	0.39	0.40	0.40	0.41
INCINERATORS	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15
OTHER (WASTE DISPOSAL)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.70	0.79	0.83	0.90	0.94	0.97	0.99	1.02	1.04	1.06	1.08	1.11	1.13	1.17	1.23
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.10	0.10	0.11	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.87	0.81	0.76	0.70	0.65	0.65	0.65	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
PETROLEUM MARKETING	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.53	0.57	0.59	0.63	0.64	0.66	0.67	0.68	0.68	0.69	0.70	0.72	0.73	0.75	0.78
FOOD AND AGRICULTURE	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06
MINERAL PROCESSES	1.97	2.13	1.26	1.31	1.34	1.38	1.40	1.42	1.44	1.46	1.48	1.52	1.54	1.58	1.64
METAL PROCESSES	0.39	0.42	0.44	0.47	0.48	0.50	0.50	0.51	0.52	0.53	0.53	0.55	0.55	0.57	0.59
WOOD AND PAPER	2.18	2.19	2.25	2.37	2.44	2.50	2.54	2.58	2.62	2.66	2.69	2.78	2.83	2.91	3.06
GLASS AND RELATED PRODUCTS	0.25	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.30	0.31
ELECTRONICS	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (INDUSTRIAL PROCESSES)	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.26
Stationary Subtotal	**14.31**	**14.29**	**13.66**	**13.97**	**13.93**	**14.02**	**14.11**	**14.17**	**14.29**	**14.41**	**14.54**	**14.80**	**14.92**	**15.19**	**15.60**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
RESIDENTIAL FUEL COMBUSTION	2.67	2.62	2.73	2.76	2.78	2.80	2.82	2.85	2.87	2.89	2.91	2.96	2.97	3.06	3.07
FARMING OPERATIONS	0.12	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.06
CONSTRUCTION AND DEMOLITION	6.22	7.06	7.29	7.75	7.98	8.21	8.18	8.41	8.64	8.86	9.09	9.45	9.63	9.99	10.55
PAVED ROAD DUST	19.27	19.06	18.62	18.79	18.88	18.97	19.06	19.14	19.24	19.33	19.42	19.60	19.69	19.87	20.15
UNPAVED ROAD DUST	1.38	1.23	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.04	1.04	1.04	1.04	1.04	1.04
FUGITIVE WINDBLOWN DUST	0.59	0.52	0.51	0.48	0.47	0.46	0.45	0.44	0.43	0.42	0.41	0.39	0.38	0.36	0.34
FIRES	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
MANAGED BURNING AND DISPOSAL	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
COOKING	13.00	13.39	13.60	14.00	14.20	14.40	14.59	14.77	14.96	15.14	15.33	15.60	15.74	16.01	16.47
Area-Wide Subtotal	**44.03**	**44.77**	**44.68**	**45.72**	**46.25**	**46.76**	**47.02**	**47.53**	**48.04**	**48.56**	**49.07**	**49.90**	**50.32**	**51.20**	**52.47**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	4.03	4.07	3.97	3.92	4.00	4.08	4.18	4.26	4.30	4.37	4.42	4.54	4.58	4.66	4.73
LIGHT DUTY TRUCKS - 1 (LDT1)	0.69	0.70	0.68	0.67	0.68	0.70	0.71	0.73	0.74	0.75	0.76	0.78	0.78	0.79	0.82
LIGHT DUTY TRUCKS - 2 (LDT2)	2.50	3.08	3.03	3.07	3.17	3.27	3.43	3.56	3.66	3.78	3.88	4.07	4.14	4.27	4.45
MEDIUM DUTY TRUCKS (MDV)	1.01	1.37	1.36	1.39	1.43	1.49	1.56	1.63	1.68	1.74	1.78	1.88	1.91	1.97	2.07
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.14	0.15	0.13	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.15	0.15	0.16
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.02	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.09	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.06	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.41	1.64	1.45	1.16	1.14	1.10	1.07	1.04	1.00	0.97	0.94	0.88	0.86	0.82	0.79
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	7.72	7.95	8.77	6.75	6.39	6.01	5.65	5.28	4.91	4.54	4.20	3.56	3.27	2.81	2.37
MOTORCYCLES (MCY)	0.06	0.10	0.10	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.21	0.19	0.18	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.14	0.14
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.17
OTHER BUSES (OB)	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MOTOR HOMES (MH)	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
On-Road Subtotal	**18.11**	**19.72**	**20.11**	**17.73**	**17.59**	**17.42**	**17.37**	**17.26**	**17.04**	**16.91**	**16.75**	**16.47**	**16.31**	**16.09**	**16.00**
Other Mobile															
AIRCRAFT	0.75	0.82	0.85	0.90	0.92	0.93	0.95	0.97	0.98	1.00	1.01	1.04	1.06	1.09	1.14
TRAINS	0.84	0.86	0.85	0.78	0.77	0.77	0.76	0.77	0.77	0.77	0.78	0.79	0.79	0.80	0.82
SHIPS AND COMMERCIAL BOATS	4.28	5.15	5.34	3.87	3.98	3.85	3.91	3.97	4.05	4.13	4.22	4.49	4.63	4.95	5.54
RECREATIONAL BOATS	2.68	2.97	3.11	3.46	3.65	3.85	4.07	4.29	4.52	4.76	5.02	5.56	5.84	6.42	7.48
OFF-ROAD RECREATIONAL VEHICLES	0.07	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.07
OFF-ROAD EQUIPMENT	12.93	12.10	11.78	10.54	10.02	9.52	9.01	8.41	7.76	7.15	6.58	5.55	5.11	4.34	3.59
FARM EQUIPMENT	0.59	0.53	0.51	0.44	0.43	0.41	0.39	0.36	0.32	0.29	0.27	0.22	0.20	0.15	0.11
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**22.13**	**22.47**	**22.48**	**20.03**	**19.81**	**19.39**	**19.14**	**18.80**	**18.45**	**18.16**	**17.93**	**17.70**	**17.68**	**17.81**	**18.73**
Grand Total	**98.57**	**101.25**	**100.93**	**97.44**	**97.58**	**97.59**	**97.64**	**97.76**	**97.82**	**98.04**	**98.28**	**98.87**	**99.23**	**100.28**	**102.80**

PM2.5 - SC															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-2.26	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.02	-0.08	-0.11	-0.14	-0.13	-0.12	-0.11	-0.10	-0.08	-0.06	-0.05	-0.03	0.00
Idling	0.00	-0.02	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	0.00	-0.08	-0.11	-0.13	-0.19	-0.21	-0.27	-0.35
Moyer	0.00	-0.16	-0.13	-0.13	-0.13	-0.13	-0.14	-0.16	-0.15	-0.15	-0.14	-0.09	-0.07	0.00	0.00
Off-road	0.00	-0.02	-0.02	-0.15	-0.24	-0.33	-0.35	-0.38	-0.39	-0.39	-0.38	-0.39	-0.36	-0.35	-0.21
Ships	0.00	0.00	0.00	-1.86	-1.96	-2.31	-2.41	-2.50	-2.62	-2.74	-2.88	-3.16	-3.31	-3.64	-4.25
Summary	**0.00**	**-2.46**	**-0.20**	**-2.25**	**-2.47**	**-2.94**	**-3.09**	**-3.18**	**-3.37**	**-3.50**	**-3.62**	**-3.89**	**-4.01**	**-4.29**	**-4.81**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2005 and recently identified previously uninventoried categories

SOX - SC - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.47	0.36	0.39	0.44	0.38	0.35	0.35	0.36	0.36	0.36	0.37	0.38	0.39	0.40	0.40
COGENERATION	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OIL AND GAS PRODUCTION (COMBUSTION)	0.03	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
PETROLEUM REFINING (COMBUSTION)	3.13	2.89	2.87	2.87	2.87	2.85	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
MANUFACTURING AND INDUSTRIAL	2.16	2.71	3.08	3.11	3.15	3.21	3.26	3.28	3.30	3.31	3.33	3.36	3.38	3.42	3.48
FOOD AND AGRICULTURAL PROCESSING	0.04	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
SERVICE AND COMMERCIAL	0.64	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.68	0.69	0.69	0.70	0.70	0.71	0.73
OTHER (FUEL COMBUSTION)	0.44	0.46	0.52	0.52	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.44	0.45
INCINERATORS	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.10	0.10	0.10	0.10
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	12.03	11.59	11.34	11.34	11.34	11.30	11.21	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.74	1.09	0.98	1.05	1.05	1.06	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
FOOD AND AGRICULTURE	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MINERAL PROCESSES	0.91	0.67	0.68	0.68	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
METAL PROCESSES	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.06	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.35	0.35	0.35	0.35	0.35	0.35	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Stationary Subtotal	**21.52**	**21.51**	**21.61**	**21.78**	**21.77**	**21.79**	**21.81**	**17.01**	**17.04**	**17.07**	**17.10**	**17.16**	**17.19**	**17.26**	**17.34**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.29	0.28	0.29	0.29	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32	0.33	0.33
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.30**	**0.29**	**0.30**	**0.30**	**0.30**	**0.30**	**0.31**	**0.31**	**0.31**	**0.32**	**0.32**	**0.32**	**0.33**	**0.34**	**0.34**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.25	0.96	0.92	0.88	0.89	0.89	0.90	0.91	0.92	0.92	0.93	0.94	0.94	0.95	0.96
LIGHT DUTY TRUCKS - 1 (LDT1)	0.28	0.21	0.20	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18
LIGHT DUTY TRUCKS - 2 (LDT2)	0.57	0.53	0.51	0.49	0.49	0.50	0.50	0.51	0.51	0.52	0.53	0.54	0.54	0.55	0.57
MEDIUM DUTY TRUCKS (MDV)	0.35	0.35	0.33	0.31	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.36
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.09	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.04	0.06	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.57	0.74	0.67	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.01	1.20	1.38	0.15	0.15	0.16	0.16	0.17	0.18	0.19	0.20	0.21	0.21	0.22	0.24
MOTORCYCLES (MCY)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.13	0.12	0.12	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.04	0.04	0.04	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.02	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
On-Road Subtotal	**4.37**	**4.43**	**4.43**	**2.18**	**2.20**	**2.22**	**2.25**	**2.28**	**2.30**	**2.33**	**2.36**	**2.41**	**2.43**	**2.47**	**2.54**
Other Mobile															
AIRCRAFT	1.30	1.50	1.57	1.70	1.77	1.83	1.90	1.97	2.03	2.10	2.16	2.30	2.36	2.49	2.72
TRAINS	1.24	1.33	1.37	0.14	0.15	0.15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
SHIPS AND COMMERCIAL BOATS	23.44	30.96	32.74	20.93	22.09	19.58	20.36	21.16	22.06	22.99	23.96	26.00	27.08	29.39	33.27
RECREATIONAL BOATS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05
OFF-ROAD RECREATIONAL VEHICLES	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.08
OFF-ROAD EQUIPMENT	1.24	1.29	1.31	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.23
FARM EQUIPMENT	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**27.37**	**35.23**	**37.13**	**23.04**	**24.27**	**21.84**	**22.56**	**23.43**	**24.41**	**25.41**	**26.45**	**28.63**	**29.79**	**32.25**	**36.38**
Grand Total	**53.57**	**61.46**	**63.47**	**47.30**	**48.54**	**46.15**	**46.93**	**43.03**	**44.06**	**45.12**	**46.22**	**48.52**	**49.74**	**52.31**	**56.60**

SOX - SC															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.34	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	-15.46	-16.32	-20.88	-21.72	-22.57	-23.65	-24.78	-25.96	-28.50	-29.88	-32.91	-38.37
Summary	**0.00**	**-0.34**	**0.00**	**-15.46**	**-16.32**	**-20.88**	**-21.72**	**-22.57**	**-23.65**	**-24.78**	**-25.96**	**-28.50**	**-29.88**	**-32.91**	**-38.37**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

San Francisco Bay Area

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NOX - San Francisco Bay Area - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	5.19	3.12	2.72	2.57	2.59	2.61	2.63	2.66	2.68	2.71	2.75	2.79	2.83	2.88	3.03
COGENERATION	3.70	3.88	3.97	4.09	4.13	4.18	4.22	4.27	4.31	4.36	4.41	4.50	4.55	4.65	4.81
OIL AND GAS PRODUCTION (COMBUSTION)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
PETROLEUM REFINING (COMBUSTION)	21.64	17.09	17.28	17.62	17.80	17.99	18.18	18.37	18.55	18.74	18.93	19.32	19.51	19.92	20.54
MANUFACTURING AND INDUSTRIAL	10.14	10.51	10.62	10.85	10.97	11.09	11.20	11.33	11.45	11.57	11.70	11.96	12.09	12.36	13.13
FOOD AND AGRICULTURAL PROCESSING	0.72	0.72	0.71	0.70	0.69	0.69	0.68	0.68	0.67	0.66	0.66	0.64	0.64	0.62	0.59
SERVICE AND COMMERCIAL	8.17	8.43	8.54	8.75	8.85	8.96	9.07	9.18	9.29	9.41	9.52	9.76	9.88	10.13	10.63
OTHER (FUEL COMBUSTION)	5.05	3.82	3.70	3.45	3.33	3.20	3.11	3.01	2.91	2.81	2.71	2.56	2.49	2.34	2.66
SEWAGE TREATMENT	0.22	0.23	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.27
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
PRINTING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PETROLEUM REFINING	2.30	2.37	2.40	2.45	2.48	2.50	2.53	2.55	2.58	2.61	2.63	2.69	2.71	2.77	2.85
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13
FOOD AND AGRICULTURE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
MINERAL PROCESSES	2.89	3.00	3.05	3.14	3.19	3.23	3.28	3.33	3.38	3.43	3.48	3.57	3.62	3.72	3.87
METAL PROCESSES	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.30	0.30	0.31	0.32
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
GLASS AND RELATED PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.82	0.64	0.65	0.66	0.67	0.67	0.68	0.69	0.70	0.70	0.71	0.73	0.73	0.75	0.77
Stationary Subtotal	**61.21**	**54.14**	**54.22**	**54.94**	**55.36**	**55.77**	**56.22**	**56.70**	**57.17**	**57.66**	**58.18**	**59.25**	**59.83**	**61.01**	**63.77**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	9.91	9.63	9.70	9.84	9.91	9.98	10.03	10.08	10.13	10.19	10.23	10.34	10.39	10.48	10.58
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
MANAGED BURNING AND DISPOSAL	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
Area-Wide Subtotal	**10.25**	**9.98**	**10.06**	**10.20**	**10.27**	**10.35**	**10.40**	**10.45**	**10.51**	**10.56**	**10.61**	**10.72**	**10.78**	**10.88**	**10.99**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	77.96	49.85	44.74	37.10	33.58	30.21	27.19	24.51	22.15	20.03	18.20	15.21	13.93	11.91	9.61
LIGHT DUTY TRUCKS - 1 (LDT1)	32.12	19.43	17.85	15.49	14.34	13.23	12.24	11.30	10.42	9.60	8.83	7.44	6.82	5.79	4.53
LIGHT DUTY TRUCKS - 2 (LDT2)	38.17	28.71	25.82	22.30	20.87	19.57	18.32	17.13	16.01	14.94	13.94	12.17	11.37	9.98	8.34
MEDIUM DUTY TRUCKS (MDV)	12.81	11.21	10.23	8.88	8.32	7.83	7.40	7.00	6.60	6.21	5.84	5.15	4.82	4.22	3.49
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.12	2.43	2.39	2.44	2.42	2.39	2.38	2.37	2.36	2.35	2.34	2.33	2.33	2.33	2.31
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	2.30	1.90	1.86	1.82	1.78	1.73	1.68	1.63	1.58	1.53	1.48	1.38	1.33	1.26	1.17
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	3.75	3.36	3.19	2.93	2.77	2.61	2.46	2.30	2.14	1.99	1.85	1.59	1.47	1.27	1.04
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	4.47	3.89	3.65	3.11	2.84	2.58	2.34	2.12	1.91	1.71	1.53	1.24	1.11	0.89	0.66
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.29	4.13	3.67	2.95	2.73	2.44	2.22	2.04	1.90	1.78	1.68	1.49	1.41	1.26	1.06
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	3.12	3.40	3.33	3.16	3.09	2.92	2.76	2.60	2.46	2.30	2.16	1.90	1.77	1.54	1.26
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	29.39	28.29	27.22	24.77	23.54	21.81	20.10	18.45	16.87	15.39	14.01	11.58	10.54	8.77	6.85
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	47.00	50.49	63.73	54.89	51.52	47.12	42.73	38.64	34.83	31.35	28.23	23.14	21.03	17.53	13.94
MOTORCYCLES (MCY)	1.37	1.74	1.78	1.85	1.86	1.87	1.89	1.91	1.92	1.94	1.96	1.98	2.00	2.04	2.11
HEAVY DUTY DIESEL URBAN BUSES (UB)	13.11	11.68	11.42	11.50	11.52	11.56	11.61	11.67	11.70	11.06	11.09	10.82	10.74	10.73	10.76
HEAVY DUTY GAS URBAN BUSES (UB)	0.29	0.29	0.29	0.30	0.31	0.32	0.32	0.31	0.32	0.36	0.37	0.38	0.39	0.39	0.42
SCHOOL BUSES (SB)	2.52	2.45	2.41	2.37	2.36	2.34	2.33	2.31	2.29	2.27	2.26	2.23	2.21	2.18	2.14
OTHER BUSES (OB)	2.17	2.10	2.06	1.98	1.92	1.84	1.75	1.66	1.57	1.47	1.38	1.19	1.10	0.95	0.75
MOTOR HOMES (MH)	1.66	1.26	1.22	1.15	1.11	1.06	1.01	0.95	0.90	0.84	0.79	0.68	0.63	0.54	0.42
On-Road Subtotal	**274.62**	**226.61**	**226.85**	**198.98**	**186.89**	**173.42**	**160.70**	**148.88**	**137.92**	**127.14**	**117.94**	**101.89**	**95.00**	**83.58**	**70.84**
Other Mobile															
AIRCRAFT	18.07	21.21	22.36	24.47	25.48	26.52	27.01	27.50	28.02	28.47	29.11	30.07	30.56	31.90	33.72
TRAINS	15.12	13.03	12.41	11.54	11.19	10.68	11.69	12.06	12.15	12.24	12.35	12.59	12.72	13.01	13.48
SHIPS AND COMMERCIAL BOATS	62.66	66.45	67.71	69.93	71.32	72.75	74.20	75.79	77.46	79.27	81.15	86.61	89.50	96.06	109.59
RECREATIONAL BOATS	4.36	5.69	6.07	6.41	6.38	6.36	6.36	6.37	6.40	6.43	6.48	6.59	6.65	6.73	6.83
OFF-ROAD RECREATIONAL VEHICLES	0.10	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.07
OFF-ROAD EQUIPMENT	125.23	115.45	111.92	101.92	96.97	91.18	87.02	82.70	78.22	73.90	69.20	61.05	57.41	51.13	44.31
FARM EQUIPMENT	10.10	9.06	8.71	7.85	7.49	7.19	6.80	6.32	5.85	5.44	5.04	4.25	3.88	3.26	2.50
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**235.64**	**230.96**	**229.26**	**222.17**	**218.87**	**214.73**	**213.14**	**210.80**	**208.15**	**205.81**	**203.37**	**201.22**	**200.79**	**202.15**	**210.49**
Grand Total	**581.72**	**521.70**	**520.39**	**486.29**	**471.38**	**454.27**	**440.46**	**426.83**	**413.74**	**401.18**	**390.11**	**373.08**	**366.40**	**357.62**	**356.08**

NOX - San Francisco Bay Area															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-14.94	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.11	-2.17	-1.87	-1.95	-1.74	-1.54	-1.35	-1.17	-1.02	-0.87	-0.73	-0.49	-0.39	-0.24	-0.11
Public Fleet	0.00	0.00	-0.01	-0.03	-0.04	-0.05	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.01
Idling	0.00	-0.39	-1.20	-2.62	-2.68	-2.72	-2.76	-2.81	-2.85	-2.90	-2.95	-3.05	-3.08	-3.13	-3.17
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04
Moyer	-0.72	-1.08	-0.79	-0.50	-0.63	-0.75	-0.87	-0.87	-0.86	-0.86	-0.76	-0.58	-0.41	0.00	0.00
Off-road	0.00	-0.15	-0.22	-0.84	-1.39	-3.21	-3.25	-3.35	-3.44	-3.30	-3.15	-2.91	-2.83	-2.73	-2.51
Ships	0.00	0.00	0.00	-0.47	-0.49	-0.52	-0.56	-0.59	-0.62	-0.66	-0.70	-0.79	-0.84	-0.95	-1.15
Summary	**-0.83**	**-18.72**	**-4.09**	**-6.40**	**-6.97**	**-8.80**	**-8.84**	**-8.84**	**-8.85**	**-8.63**	**-8.35**	**-7.86**	**-7.60**	**-7.10**	**-6.98**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - San Francisco Bay Area - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.35	0.29	0.23	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.23
COGENERATION	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.17
OIL AND GAS PRODUCTION (COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING (COMBUSTION)	0.62	0.48	0.48	0.49	0.49	0.50	0.50	0.51	0.52	0.52	0.53	0.54	0.54	0.55	0.57
MANUFACTURING AND INDUSTRIAL	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12
FOOD AND AGRICULTURAL PROCESSING	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
SERVICE AND COMMERCIAL	0.92	0.95	0.96	0.99	1.00	1.01	1.03	1.04	1.06	1.07	1.09	1.12	1.13	1.16	1.22
OTHER (FUEL COMBUSTION)	0.57	0.40	0.38	0.34	0.32	0.30	0.29	0.27	0.26	0.24	0.23	0.20	0.19	0.17	0.18
SEWAGE TREATMENT	0.22	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25
LANDFILLS	2.35	2.44	2.45	2.47	2.47	2.48	2.49	2.50	2.50	2.51	2.51	2.52	2.52	2.52	2.51
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.14	0.14	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.18
OTHER (WASTE DISPOSAL)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
LAUNDERING	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
DEGREASING	6.62	4.89	4.96	5.08	5.15	5.21	5.27	5.34	5.40	5.46	5.52	5.61	5.66	5.75	5.89
COATINGS AND RELATED PROCESS SOLVENTS	16.52	16.36	16.58	17.02	17.24	17.45	17.66	17.86	18.05	18.26	18.45	18.77	18.93	19.24	19.70
PRINTING	3.65	3.74	3.76	3.82	3.85	3.88	3.91	3.94	3.96	3.99	4.02	4.08	4.11	4.17	4.25
ADHESIVES AND SEALANTS	8.50	8.79	8.85	8.99	9.05	9.12	9.14	9.15	9.16	9.16	9.17	9.21	9.23	9.27	9.46
OTHER (CLEANING AND SURFACE COATINGS)	0.52	0.53	0.53	0.54	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.58	0.59	0.59	0.60
OIL AND GAS PRODUCTION	0.28	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.34	0.35	0.36	0.37
PETROLEUM REFINING	13.58	13.60	11.72	12.03	12.19	12.34	12.50	12.66	12.83	12.99	13.16	13.49	13.66	14.01	14.54
PETROLEUM MARKETING	18.55	15.10	14.33	13.82	13.62	13.67	13.75	13.83	13.91	13.99	14.07	14.26	14.34	14.53	14.80
OTHER (PETROLEUM PRODUCTION AND MARKETIN(	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHEMICAL	3.82	3.91	3.95	4.05	4.10	4.15	4.20	4.25	4.30	4.35	4.40	4.49	4.54	4.64	4.78
FOOD AND AGRICULTURE	2.17	2.25	2.30	2.39	2.44	2.48	2.54	2.59	2.64	2.70	2.75	2.87	2.94	3.06	3.27
MINERAL PROCESSES	0.66	0.68	0.68	0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.76	0.78	0.78	0.80	0.82
METAL PROCESSES	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.71	0.72	0.73	0.76	0.77	0.78	0.79	0.80	0.81	0.82	0.83	0.85	0.85	0.87	0.89
OTHER (INDUSTRIAL PROCESSES)	4.87	4.74	4.73	4.80	4.84	4.88	4.91	4.94	4.98	5.01	5.05	5.12	5.15	5.22	5.33
Stationary Subtotal	**86.09**	**80.98**	**78.79**	**79.68**	**80.18**	**80.93**	**81.67**	**82.41**	**83.13**	**83.86**	**84.58**	**85.97**	**86.67**	**88.09**	**90.42**
Area-Wide															
CONSUMER PRODUCTS	50.60	45.03	44.87	43.16	43.44	43.71	43.94	44.17	44.45	44.67	44.95	45.42	45.64	46.13	46.74
ARCHITECTURAL COATINGS AND RELATED PROCES	24.05	24.07	24.28	24.70	24.91	25.10	25.26	25.42	25.59	25.75	25.91	26.24	26.38	26.68	27.10
PESTICIDES/FERTILIZERS	1.05	1.06	1.05	1.04	1.04	1.03	1.04	1.05	1.06	1.08	1.09	1.12	1.13	1.16	1.22
ASPHALT PAVING / ROOFING	1.92	1.98	2.01	2.07	2.10	2.13	2.15	2.18	2.21	2.23	2.26	2.30	2.33	2.37	2.44
RESIDENTIAL FUEL COMBUSTION	2.48	2.53	2.54	2.56	2.59	2.58	2.60	2.62	2.63	2.65	2.67	2.70	2.72	2.76	2.80
FARMING OPERATIONS	5.44	5.67	5.75	5.90	5.98	6.05	6.13	6.21	6.28	6.36	6.43	6.59	6.66	6.81	7.04
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.22
MANAGED BURNING AND DISPOSAL	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
COOKING	1.05	1.08	1.09	1.13	1.15	1.16	1.18	1.19	1.21	1.23	1.24	1.27	1.28	1.30	1.34
OTHER (MISCELLANEOUS PROCESSES)	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10
Area-Wide Subtotal	**87.02**	**81.86**	**82.04**	**81.01**	**81.65**	**82.22**	**82.77**	**83.31**	**83.90**	**84.44**	**85.03**	**86.12**	**86.63**	**87.71**	**89.19**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	100.94	71.53	64.67	54.34	49.55	44.78	40.63	36.93	33.88	31.12	28.85	25.20	23.58	21.06	18.07
LIGHT DUTY TRUCKS - 1 (LDT1)	31.29	22.56	21.37	19.62	18.58	17.48	16.57	15.67	14.79	13.92	13.10	11.60	10.90	9.78	8.38
LIGHT DUTY TRUCKS - 2 (LDT2)	25.27	20.96	19.37	17.76	17.18	16.69	16.15	15.64	15.16	14.67	14.23	13.46	13.08	12.43	11.67
MEDIUM DUTY TRUCKS (MDV)	6.65	6.13	5.70	5.27	5.13	5.03	4.96	4.89	4.84	4.77	4.70	4.57	4.48	4.30	4.03
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.57	2.43	2.11	1.72	1.58	1.47	1.39	1.34	1.29	1.26	1.24	1.22	1.21	1.20	1.16
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	2.52	2.16	2.08	1.94	1.87	1.78	1.70	1.61	1.52	1.41	1.32	1.18	1.10	0.95	0.76
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	4.01	3.24	2.95	2.47	2.22	2.01	1.83	1.65	1.50	1.35	1.23	1.03	0.93	0.79	0.65
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.81	1.56	1.43	1.21	1.11	1.00	0.92	0.83	0.75	0.67	0.60	0.48	0.43	0.33	0.23
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.14	0.13	0.12	0.11	0.11	0.10	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.07
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.13	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.11	0.09
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.53	0.58	0.57	0.57	0.56	0.54	0.52	0.50	0.48	0.47	0.45	0.42	0.40	0.38	0.36
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	3.28	3.57	4.47	3.99	3.75	3.49	3.25	3.01	2.80	2.59	2.40	2.09	1.96	1.74	1.49
MOTORCYCLES (MCY)	7.45	8.76	8.48	8.07	7.84	7.67	7.54	7.44	7.38	7.35	7.35	7.33	7.36	7.44	7.65
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.45	0.43	0.42	0.43	0.43	0.43	0.43	0.43	0.44	0.43	0.43	0.43	0.43	0.43	0.43
HEAVY DUTY GAS URBAN BUSES (UB)	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.25	0.26	0.31	0.32	0.34	0.35	0.33	0.35
SCHOOL BUSES (SB)	0.18	0.16	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.12
OTHER BUSES (OB)	0.30	0.28	0.27	0.26	0.26	0.26	0.25	0.25	0.24	0.23	0.22	0.20	0.19	0.18	0.15
MOTOR HOMES (MH)	0.63	0.43	0.39	0.33	0.31	0.28	0.25	0.23	0.20	0.18	0.16	0.12	0.10	0.08	0.05
On-Road Subtotal	**188.26**	**145.30**	**134.97**	**118.65**	**111.02**	**103.57**	**97.04**	**91.05**	**85.90**	**81.11**	**76.97**	**70.00**	**66.83**	**61.73**	**55.72**
Other Mobile															
AIRCRAFT	6.08	6.56	6.78	7.07	7.20	7.37	7.55	7.74	7.92	8.10	8.36	8.71	8.87	9.25	9.63
TRAINS	0.91	0.91	0.90	0.88	0.87	0.86	0.87	0.87	0.87	0.88	0.88	0.89	0.89	0.90	0.92
SHIPS AND COMMERCIAL BOATS	3.90	3.95	3.94	3.93	3.92	3.92	3.90	3.89	3.88	3.87	3.86	4.00	4.09	4.26	4.74
RECREATIONAL BOATS	28.40	28.30	27.75	26.45	25.71	25.09	24.58	24.17	23.84	23.57	23.35	23.04	22.93	22.80	23.12
OFF-ROAD RECREATIONAL VEHICLES	1.98	1.90	1.72	1.58	1.56	1.56	1.58	1.61	1.63	1.67	1.71	1.81	1.88	2.00	2.20
OFF-ROAD EQUIPMENT	50.98	50.35	47.24	42.54	40.43	38.23	36.46	34.75	33.19	31.76	30.49	28.43	27.70	26.62	26.00
FARM EQUIPMENT	2.06	1.89	1.79	1.60	1.52	1.46	1.37	1.26	1.15	1.06	0.97	0.81	0.73	0.62	0.52
FUEL STORAGE AND HANDLING	10.40	9.59	9.14	6.69	6.16	5.75	5.38	5.05	4.77	4.52	4.30	3.95	3.80	3.55	3.25
Other Mobile Subtotal	**104.70**	**103.45**	**99.26**	**90.75**	**87.39**	**84.24**	**81.70**	**79.34**	**77.26**	**75.42**	**73.92**	**71.63**	**70.89**	**70.01**	**70.37**
Grand Total	**466.07**	**411.58**	**395.05**	**370.09**	**360.23**	**350.97**	**343.18**	**336.12**	**330.20**	**324.82**	**320.51**	**313.72**	**311.01**	**307.55**	**305.70**

ROG - San Francisco Bay Area															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.01	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.05	-0.10	-0.08	-0.05	-0.04	-0.02	-0.01	0.00	0.01	0.02	0.03	0.05	0.07	0.09	0.14
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.01	-0.02	-0.03	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.22	-0.22	-0.29	-0.36	-0.50	-0.57	-0.71	-0.92
Moyer	0.00	0.00	-0.02	-0.05	-0.07	-0.10	-0.12	-0.13	-0.11	-0.11	-0.10	-0.08	-0.05	0.00	0.00
Consumer Products	0.00	0.00	0.00	-1.88	-1.89	-1.90	-1.91	-1.92	-1.94	-1.94	-1.96	-1.98	-1.99	-2.01	-2.03
Off-road	0.00	0.00	0.00	0.00	0.00	-0.22	-0.26	-0.29	-0.33	-0.36	-0.39	-0.44	-0.46	-0.52	-0.46
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.05**	**-1.11**	**-0.11**	**-2.01**	**-2.04**	**-2.28**	**-2.41**	**-2.61**	**-2.62**	**-2.71**	**-2.80**	**-2.96**	**-3.02**	**-3.15**	**-3.28**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

San Joaquin Valley

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NOX - SJV - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	3.13	3.32	3.27	3.00	3.07	3.15	3.17	3.18	3.19	3.21	3.22	3.32	3.37	3.47	3.57
COGENERATION	10.57	10.04	9.36	7.11	7.27	7.28	7.33	7.39	7.44	7.48	7.54	7.80	7.94	8.20	8.36
OIL AND GAS PRODUCTION (COMBUSTION)	15.52	11.19	11.06	10.20	10.09	9.99	9.94	9.88	9.83	9.77	9.72	9.70	9.69	9.67	9.73
PETROLEUM REFINING (COMBUSTION)	0.23	0.20	0.15	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
MANUFACTURING AND INDUSTRIAL	36.62	37.72	38.45	39.42	39.92	40.55	41.29	42.02	42.76	43.51	44.25	45.31	45.84	46.90	47.48
FOOD AND AGRICULTURAL PROCESSING	30.49	30.50	28.51	19.74	17.24	14.75	12.93	11.19	9.44	7.71	6.00	5.97	5.96	5.93	5.91
SERVICE AND COMMERCIAL	4.65	4.41	4.43	4.45	4.47	4.50	4.51	4.53	4.56	4.58	4.61	4.60	4.61	4.63	4.63
OTHER (FUEL COMBUSTION)	1.92	1.59	1.53	1.42	1.37	1.32	1.28	1.24	1.20	1.15	1.11	1.06	1.03	0.98	0.99
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
INCINERATORS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.09	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13
PETROLEUM REFINING	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
PETROLEUM MARKETING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.28	0.30	0.31	0.33	0.34	0.34	0.35	0.36	0.37	0.37	0.38	0.39	0.40	0.41	0.43
FOOD AND AGRICULTURE	9.28	9.15	9.10	9.06	9.02	8.98	8.93	8.91	8.88	8.86	8.85	8.82	8.81	8.81	8.74
MINERAL PROCESSES	2.28	2.36	2.37	2.47	2.54	2.58	2.64	2.68	2.74	2.81	2.84	2.92	2.98	3.08	3.23
METAL PROCESSES	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	9.60	9.38	7.64	8.02	8.16	8.37	8.56	8.73	8.94	9.08	9.32	9.64	9.80	10.12	10.65
OTHER (INDUSTRIAL PROCESSES)	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Extra-inventory Reductions (District Rules)	0.00	0.00	0.00	-0.81	-1.01	-1.22	-1.43	-1.59	-1.72	-1.85	-1.96	-2.07	-2.22	-2.63	-2.63
Stationary Subtotal	**125.21**	**120.80**	**116.86**	**105.21**	**103.27**	**101.39**	**100.30**	**99.33**	**98.43**	**97.51**	**96.70**	**98.29**	**99.07**	**100.42**	**101.94**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	3.24	3.08	3.03	2.96	2.96	2.96	2.97	2.97	2.98	2.98	2.99	3.00	3.01	3.02	3.04
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
MANAGED BURNING AND DISPOSAL	8.28	8.16	8.14	8.10	8.08	8.06	8.04	8.02	8.00	7.98	7.96	7.91	7.89	7.85	7.81
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**11.54**	**11.27**	**11.20**	**11.09**	**11.07**	**11.05**	**11.04**	**11.02**	**11.01**	**10.99**	**10.98**	**10.95**	**10.93**	**10.91**	**10.88**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	31.07	21.58	19.78	16.51	15.33	14.13	12.79	11.57	10.45	9.42	8.54	7.10	6.52	5.66	4.69
LIGHT DUTY TRUCKS - 1 (LDT1)	13.15	9.70	8.88	7.44	6.95	6.47	5.93	5.45	5.00	4.57	4.17	3.45	3.14	2.66	2.12
LIGHT DUTY TRUCKS - 2 (LDT2)	24.37	19.23	17.70	15.06	14.22	13.41	12.45	11.53	10.66	9.85	9.11	7.83	7.28	6.37	5.38
MEDIUM DUTY TRUCKS (MDV)	14.71	13.08	12.07	10.27	9.74	9.20	8.64	8.10	7.58	7.09	6.63	5.77	5.39	4.69	3.84
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	4.90	4.45	4.17	3.83	3.80	3.77	3.71	3.67	3.64	3.61	3.59	3.56	3.55	3.54	3.50
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	1.01	0.97	0.95	0.92	0.92	0.92	0.90	0.89	0.88	0.87	0.85	0.83	0.82	0.81	0.79
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	2.31	2.05	1.95	1.74	1.69	1.63	1.54	1.44	1.35	1.25	1.16	1.00	0.92	0.80	0.66
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	2.69	2.41	2.24	1.96	1.89	1.82	1.76	1.69	1.64	1.59	1.53	1.46	1.43	1.38	1.35
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.36	5.43	4.87	3.87	3.71	3.45	3.19	2.98	2.82	2.68	2.55	2.28	2.16	1.94	1.63
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	2.33	3.35	3.21	2.87	2.82	2.68	2.52	2.36	2.22	2.08	1.95	1.71	1.59	1.39	1.13
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	19.84	21.33	20.48	18.24	17.72	16.81	15.61	14.42	13.24	12.11	11.03	9.15	8.35	7.03	5.62
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	198.24	213.30	256.26	215.35	205.92	192.43	178.47	164.60	150.90	137.81	125.60	104.20	95.15	80.42	66.28
MOTORCYCLES (MCY)	0.66	1.34	1.36	1.35	1.36	1.39	1.38	1.39	1.40	1.41	1.43	1.47	1.49	1.54	1.62
HEAVY DUTY DIESEL URBAN BUSES (UB)	2.11	2.24	2.22	2.18	2.26	2.33	2.36	2.38	2.41	2.38	2.40	2.45	2.46	2.47	2.51
HEAVY DUTY GAS URBAN BUSES (UB)	0.25	0.26	0.27	0.27	0.28	0.30	0.31	0.32	0.32	0.34	0.35	0.36	0.37	0.38	0.39
SCHOOL BUSES (SB)	2.22	2.39	2.38	2.25	2.20	2.25	2.14	2.12	2.00	1.88	1.75	1.09	1.07	1.05	1.02
OTHER BUSES (OB)	0.92	1.07	1.05	0.99	0.99	0.96	0.92	0.87	0.83	0.78	0.73	0.64	0.60	0.52	0.43
MOTOR HOMES (MH)	1.26	1.10	1.06	0.97	0.96	0.94	0.90	0.86	0.82	0.77	0.73	0.64	0.59	0.51	0.40
Extra-inventory Reductions (District Rules)	0.00	0.00	0.00	-3.80	-4.50	-5.20	-5.90	-6.30	-5.25	-4.20	-3.50	-2.10	-1.87	-1.40	-1.10
On-Road Subtotal	**322.40**	**325.26**	**360.90**	**302.28**	**288.24**	**269.66**	**249.61**	**230.35**	**212.90**	**196.30**	**180.61**	**152.88**	**141.02**	**121.76**	**102.27**
Other Mobile															
AIRCRAFT	2.94	3.05	3.16	4.07	4.16	4.34	4.53	4.61	4.68	4.76	4.84	4.99	5.07	5.24	5.27
TRAINS	28.46	23.64	22.24	21.10	20.87	20.04	20.36	20.50	20.58	20.67	20.78	21.02	21.16	21.46	21.98
SHIPS AND COMMERCIAL BOATS	1.06	1.02	1.06	1.11	1.08	1.05	1.02	1.03	1.04	1.05	1.09	1.21	1.30	1.50	1.72
RECREATIONAL BOATS	3.89	5.02	5.33	5.59	5.56	5.54	5.52	5.52	5.53	5.55	5.58	5.65	5.69	5.73	5.77
OFF-ROAD RECREATIONAL VEHICLES	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.20	0.20	0.22	0.23	0.24	0.27
OFF-ROAD EQUIPMENT	75.42	70.16	67.79	61.66	58.62	55.46	52.52	49.65	46.77	44.14	41.43	36.68	34.62	31.05	27.13
FARM EQUIPMENT	71.22	63.95	61.53	55.41	52.85	50.77	48.03	44.60	41.25	38.38	35.50	30.34	27.87	23.37	17.92
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**183.15**	**166.99**	**161.26**	**149.09**	**143.30**	**137.36**	**132.16**	**126.09**	**120.04**	**114.75**	**109.42**	**100.12**	**95.93**	**88.60**	**80.05**
Grand Total	**642.30**	**624.32**	**650.23**	**567.67**	**545.88**	**519.46**	**493.11**	**466.79**	**442.38**	**419.55**	**397.70**	**362.24**	**346.95**	**321.68**	**295.14**

NOX - SJV															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-63.22	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.69	-8.75	-11.44	-11.94	-10.95	-9.96	-8.95	-7.96	-7.04	-6.12	-5.25	-3.57	-2.84	-1.73	-0.75
Public Fleet	0.00	0.00	-0.01	-0.03	-0.04	-0.05	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.01
Idling	0.00	-2.02	-4.68	-9.99	-10.36	-10.73	-11.09	-11.45	-11.80	-12.15	-12.49	-13.12	-13.42	-13.99	-14.81
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.03
Moyer	-0.82	-1.09	-0.92	-0.59	-0.74	-0.90	-1.05	-1.05	-1.05	-1.05	-0.94	-0.71	-0.51	0.00	0.00
Off-road	0.00	-0.15	-0.23	-0.81	-1.34	-2.28	-2.27	-2.34	-2.40	-2.22	-2.03	-1.71	-1.58	-1.37	-1.00
Ships	0.00	0.00	0.00	-0.03	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.05	-0.05	-0.05	-0.06	-0.07
Rule 4702	5.53	6.45	5.40	-1.93	-3.92	-5.89	-7.11	-8.24	-9.34	-10.39	-11.43	-10.02	-9.29	-7.75	-5.31
Rule 4103	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Rule 9310	0.00	0.00	0.00	0.11	0.22	0.22	0.33	0.33	0.44	0.54	0.65	1.27	1.25	1.22	1.17
Other District Rules (4207, 4308, 4309, & 9510)	0	0	0	4.61	5.51	6.42	7.328	7.886	6.969	6.052	5.46	4.174	4.088	4.03	3.73
Summary	**4.02**	**-68.73**	**-11.82**	**-20.56**	**-21.61**	**-23.16**	**-22.84**	**-22.85**	**-24.25**	**-25.37**	**-26.07**	**-23.73**	**-22.34**	**-19.65**	**-17.01**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - SJV - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.50	0.52	0.53	0.54	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.59	0.60	0.62	0.64
COGENERATION	0.39	0.43	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.46	0.46
OIL AND GAS PRODUCTION (COMBUSTION)	3.06	3.29	3.41	3.28	3.26	3.24	3.24	3.24	3.23	3.23	3.23	3.27	3.29	3.32	3.40
PETROLEUM REFINING (COMBUSTION)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANUFACTURING AND INDUSTRIAL	0.36	0.39	0.40	0.41	0.42	0.42	0.43	0.44	0.45	0.45	0.46	0.47	0.48	0.49	0.50
FOOD AND AGRICULTURAL PROCESSING	2.53	2.50	2.49	2.47	2.46	2.45	2.44	2.43	2.42	2.41	2.40	2.39	2.38	2.36	2.34
SERVICE AND COMMERCIAL	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.29
OTHER (FUEL COMBUSTION)	0.21	0.16	0.16	0.14	0.13	0.13	0.12	0.12	0.11	0.10	0.10	0.09	0.09	0.08	0.08
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	1.49	1.59	1.62	1.68	1.71	1.74	1.76	1.79	1.82	1.85	1.88	1.93	1.96	2.01	2.09
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
OTHER (WASTE DISPOSAL)	56.67	57.44	59.42	63.36	64.10	64.81	65.49	66.00	69.33	72.73	73.41	74.86	75.90	78.00	81.14
LAUNDERING	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
DEGREASING	8.74	1.47	1.46	1.46	1.47	1.49	1.50	1.51	1.53	1.54	1.55	1.58	1.59	1.61	1.64
COATINGS AND RELATED PROCESS SOLVENTS	7.80	7.66	7.77	8.17	7.55	7.79	7.98	8.17	8.37	8.61	8.80	9.14	9.35	9.66	10.15
PRINTING	1.60	1.66	1.67	1.74	1.78	1.81	1.85	1.88	1.92	1.96	1.99	2.06	2.09	2.16	2.26
ADHESIVES AND SEALANTS	2.99	3.19	3.19	3.32	3.38	3.45	3.52	3.59	3.66	3.73	3.80	3.94	3.93	4.08	4.30
OTHER (CLEANING AND SURFACE COATINGS)	3.01	3.38	3.52	3.74	3.85	3.97	4.08	4.19	4.30	4.41	4.51	4.70	4.80	4.99	5.27
OIL AND GAS PRODUCTION	29.77	27.92	28.35	27.54	27.15	26.77	26.46	26.14	25.83	25.51	25.20	24.71	24.47	23.98	23.44
PETROLEUM REFINING	0.72	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.67	0.67	0.67	0.67	0.67	0.67	0.67
PETROLEUM MARKETING	7.19	7.55	7.68	7.91	8.06	8.20	8.33	8.45	8.58	8.71	8.83	9.11	9.23	9.49	9.93
OTHER (PETROLEUM PRODUCTION AND MARKET	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHEMICAL	2.18	2.35	2.42	2.50	2.56	2.60	2.65	2.69	2.75	2.79	2.85	2.94	2.98	3.07	3.39
FOOD AND AGRICULTURE	12.78	12.72	12.80	11.77	11.86	11.95	12.05	12.16	12.26	12.36	12.46	12.68	12.79	13.01	13.36
MINERAL PROCESSES	0.38	0.39	0.41	0.42	0.43	0.44	0.45	0.45	0.47	0.48	0.48	0.50	0.51	0.52	0.55
METAL PROCESSES	0.43	0.43	0.43	0.44	0.45	0.45	0.46	0.47	0.48	0.49	0.50	0.52	0.52	0.53	0.55
WOOD AND PAPER	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
GLASS AND RELATED PRODUCTS	0.36	0.37	0.37	0.39	0.40	0.41	0.42	0.42	0.43	0.44	0.45	0.47	0.47	0.49	0.52
OTHER (INDUSTRIAL PROCESSES)	0.20	0.21	0.22	0.23	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.27	0.29	0.31	0.32
Extra-inventory Adjustment	0.00	0.00	0.00	-1.13	-1.11	-1.10	-1.08	-1.07	-1.06	-1.04	-1.03	-1.00	-0.99	-0.97	-0.95
Stationary Subtotal	**143.78**	**136.75**	**139.87**	**141.95**	**142.25**	**143.39**	**144.51**	**145.46**	**149.26**	**153.18**	**154.31**	**156.82**	**158.33**	**161.44**	**166.57**
Area-Wide															
CONSUMER PRODUCTS	25.13	23.48	23.58	23.00	23.32	23.61	24.09	24.56	25.04	25.52	25.99	26.95	27.43	28.38	29.89
ARCHITECTURAL COATINGS AND RELATED PROC	13.63	11.09	11.20	11.39	11.49	11.58	11.68	11.79	11.89	11.99	12.09	12.37	12.51	12.78	13.26
PESTICIDES/FERTILIZERS	15.58	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91	17.91
ASPHALT PAVING / ROOFING	2.93	2.97	2.99	3.01	3.02	3.03	3.04	3.04	3.05	3.06	3.06	3.08	3.09	3.10	3.13
RESIDENTIAL FUEL COMBUSTION	0.49	0.47	0.45	0.44	0.42	0.42	0.41	0.40	0.39	0.39	0.39	0.39	0.39	0.40	0.41
FARMING OPERATIONS	62.03	65.38	66.50	59.86	51.71	52.42	53.37	54.33	55.28	56.23	57.18	59.08	60.04	61.94	64.79
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12
MANAGED BURNING AND DISPOSAL	13.73	13.64	13.60	12.32	12.28	12.24	12.20	12.16	12.12	12.08	12.04	11.96	11.91	11.82	11.71
COOKING	0.45	0.44	0.45	0.46	0.47	0.48	0.48	0.49	0.50	0.51	0.51	0.53	0.53	0.55	0.57
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	-1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**134.06**	**135.47**	**136.77**	**128.47**	**120.70**	**121.78**	**122.20**	**124.79**	**126.28**	**127.78**	**129.29**	**132.37**	**133.91**	**136.99**	**141.78**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	39.99	31.12	28.59	23.93	22.43	20.79	19.08	17.44	15.95	14.60	13.45	11.58	10.80	9.64	8.41
LIGHT DUTY TRUCKS - 1 (LDT1)	14.19	11.60	10.72	9.07	8.50	7.92	7.43	6.94	6.46	6.00	5.59	4.82	4.47	4.03	3.57
LIGHT DUTY TRUCKS - 2 (LDT2)	17.71	15.76	14.82	13.24	12.90	12.55	12.02	11.47	10.92	10.38	9.92	9.12	8.77	8.25	7.79
MEDIUM DUTY TRUCKS (MDV)	9.50	8.64	8.11	7.24	7.08	6.90	6.72	6.52	6.31	6.12	5.94	5.59	5.42	5.08	4.66
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	6.05	5.12	4.42	3.43	3.19	3.01	2.84	2.71	2.59	2.51	2.44	2.33	2.28	2.17	1.99
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	1.32	1.19	1.10	0.94	0.89	0.85	0.79	0.74	0.70	0.65	0.60	0.54	0.51	0.46	0.40
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	3.63	2.91	2.66	2.18	2.03	1.88	1.69	1.50	1.34	1.18	1.03	0.80	0.68	0.53	0.41
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.48	1.25	1.13	0.90	0.84	0.78	0.73	0.67	0.62	0.57	0.51	0.43	0.40	0.32	0.27
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.19	0.18	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.13	0.13	0.12
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.10	0.15	0.15	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.12	0.11	0.11	0.10	0.09
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.45	0.53	0.53	0.50	0.50	0.50	0.49	0.47	0.45	0.43	0.42	0.39	0.38	0.36	0.35
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	14.63	16.01	19.40	17.07	16.37	15.59	14.78	13.95	13.10	12.27	11.47	10.03	9.40	8.36	7.34
MOTORCYCLES (MCY)	3.59	6.13	5.92	5.50	5.44	5.43	5.30	5.27	5.26	5.28	5.31	5.40	5.46	5.62	5.89
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10
HEAVY DUTY GAS URBAN BUSES (UB)	0.12	0.15	0.14	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
SCHOOL BUSES (SB)	0.23	0.22	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.18	0.18
OTHER BUSES (OB)	0.29	0.23	0.22	0.20	0.20	0.19	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.11	0.09
MOTOR HOMES (MH)	0.49	0.36	0.33	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.15	0.11	0.10	0.07	0.05
On-Road Subtotal	**113.88**	**101.65**	**98.71**	**85.21**	**81.37**	**77.38**	**73.03**	**68.80**	**64.80**	**61.05**	**57.70**	**52.00**	**49.52**	**45.72**	**41.90**
Other Mobile															
AIRCRAFT	6.57	6.78	6.98	8.66	8.83	9.16	9.51	9.65	9.79	9.93	10.08	10.37	10.52	10.82	10.87
TRAINS	1.63	1.64	1.61	1.57	1.55	1.54	1.55	1.55	1.55	1.56	1.56	1.57	1.57	1.58	1.60
SHIPS AND COMMERCIAL BOATS	0.12	0.12	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.08	0.08	0.10	0.10
RECREATIONAL BOATS	20.27	20.45	20.08	19.18	18.66	18.22	17.86	17.57	17.33	17.14	16.99	16.77	16.69	16.60	16.79
OFF-ROAD RECREATIONAL VEHICLES	5.78	7.23	7.43	7.76	7.94	8.15	8.38	8.64	8.90	9.19	9.48	10.14	10.50	11.25	12.48
OFF-ROAD EQUIPMENT	22.12	22.05	20.80	18.84	17.97	17.07	16.23	15.45	14.72	14.04	13.44	12.41	12.03	11.45	11.24
FARM EQUIPMENT	14.60	13.28	12.60	11.19	10.61	10.14	9.52	8.70	7.89	7.20	6.58	5.51	5.01	4.22	3.46
FUEL STORAGE AND HANDLING	5.18	5.08	4.83	3.59	3.33	3.13	2.96	2.80	2.66	2.54	2.44	2.28	2.21	2.10	1.98
Other Mobile Subtotal	**76.28**	**76.62**	**74.45**	**70.89**	**68.99**	**67.51**	**66.10**	**64.44**	**62.93**	**61.67**	**60.64**	**59.12**	**58.62**	**58.12**	**58.53**
Grand Total	**468.01**	**450.49**	**449.80**	**426.52**	**413.32**	**410.06**	**405.84**	**403.49**	**403.27**	**403.68**	**401.94**	**400.31**	**400.38**	**402.27**	**408.78**

ROG - SJV															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-4.52	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-7.73	-4.98	-4.75	-4.28	-4.05	-3.83	-3.75	-3.68	-3.60	-3.52	-3.45	-3.30	-3.23	-3.09	-2.97
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.03
Moyer	0.00	0.00	-0.02	-0.05	-0.07	-0.09	-0.11	-0.11	-0.11	-0.11	-0.10	-0.08	-0.05	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	-0.07	-0.10	-0.13	-0.16	-0.19	-0.21	-0.25	-0.27	-0.31	-0.25
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Composting Green Waste	46.60	47.20	49.13	53.00	53.67	54.33	55.00	55.40	58.70	62.00	62.67	64.00	65.00	67.00	70.00
Composting Biosolids	9.58	9.70	9.74	9.80	9.86	9.90	9.90	10.00	10.02	10.10	10.10	10.20	10.22	10.30	10.40
Rule 4602-4612	0.00	0.00	0.00	0.00	-0.82	-0.83	-0.83	-0.84	-0.84	-0.85	-0.85	-0.86	-0.86	-0.87	-0.88
Rule 4694	0.00	0.00	0.00	-1.23	-1.24	-1.25	-1.26	-1.27	-1.28	-1.29	-1.30	-1.32	-1.33	-1.35	-1.38
Rule 4570	0.00	0.00	0.00	-8.88	-18.16	-18.56	-19.09	-19.63	-20.17	-20.70	-21.24	-22.31	-22.84	-23.92	-25.52
Rule 4301	0.00	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Rule 4401	0.00	0.00	0.00	-1.13	-1.11	-1.10	-1.08	-1.07	-1.06	-1.04	-1.03	-1.00	-0.99	-0.97	-0.95
Consumer Products	0.00	0.00	0.00	-1.00	-1.02	-1.03	-1.05	-1.07	-1.09	-1.11	-1.13	-1.17	-1.19	-1.24	-1.30
Summary	**48.44**	**47.35**	**54.06**	**46.18**	**37.00**	**37.43**	**37.57**	**37.55**	**40.36**	**43.24**	**43.41**	**43.84**	**44.39**	**45.49**	**47.07**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

PM2.5 - SJV - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.56	0.60	0.61	0.60	0.61	0.62	0.62	0.62	0.62	0.62	0.62	0.63	0.63	0.64	0.65
COGENERATION	1.08	1.16	1.21	1.22	1.25	1.25	1.25	1.26	1.27	1.28	1.29	1.32	1.34	1.38	1.39
OIL AND GAS PRODUCTION (COMBUSTION)	0.96	1.05	1.09	1.05	1.05	1.04	1.04	1.04	1.05	1.05	1.05	1.07	1.08	1.10	1.14
PETROLEUM REFINING (COMBUSTION)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MANUFACTURING AND INDUSTRIAL	0.74	0.79	0.81	0.83	0.84	0.86	0.87	0.89	0.91	0.92	0.94	0.96	0.97	0.99	1.01
FOOD AND AGRICULTURAL PROCESSING	1.85	1.79	1.74	1.65	1.61	1.57	1.52	1.48	1.44	1.40	1.36	1.28	1.24	1.16	1.04
SERVICE AND COMMERCIAL	0.41	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44
OTHER (FUEL COMBUSTION)	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
OTHER (PETROLEUM PRODUCTION AND MARKETI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	2.01	2.25	2.36	2.49	2.54	2.62	2.67	2.73	2.80	2.86	2.93	3.02	3.08	3.19	3.34
FOOD AND AGRICULTURE	4.80	4.78	4.76	4.75	4.71	4.70	4.71	4.71	4.72	4.72	4.71	4.72	4.72	4.73	4.75
MINERAL PROCESSES	1.92	1.98	2.01	2.07	2.12	2.15	2.17	2.20	2.23	2.26	2.32	2.38	2.42	2.47	2.56
METAL PROCESSES	0.13	0.14	0.14	0.14	0.15	0.16	0.16	0.16	0.16	0.17	0.18	0.19	0.19	0.19	0.21
WOOD AND PAPER	0.42	0.41	0.42	0.44	0.45	0.47	0.47	0.48	0.48	0.49	0.49	0.67	0.76	0.94	0.99
GLASS AND RELATED PRODUCTS	1.00	1.03	1.03	1.08	1.10	1.12	1.15	1.17	1.20	1.22	1.25	1.29	1.31	1.35	1.42
OTHER (INDUSTRIAL PROCESSES)	0.11	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.17
Stationary Subtotal	**16.28**	**16.83**	**17.02**	**17.18**	**17.29**	**17.41**	**17.52**	**17.63**	**17.76**	**17.89**	**18.04**	**18.45**	**18.68**	**19.09**	**19.47**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.85	0.82	0.80	0.77	0.75	0.74	0.73	0.72	0.70	0.69	0.70	0.71	0.71	0.72	0.74
FARMING OPERATIONS	27.52	24.16	22.80	22.93	22.99	20.99	21.09	21.20	21.30	21.40	21.51	21.72	21.82	22.04	22.40
CONSTRUCTION AND DEMOLITION	2.73	2.45	2.68	2.44	2.67	2.69	2.47	2.49	2.51	2.53	2.55	2.60	2.62	2.66	2.47
PAVED ROAD DUST	7.85	7.95	8.13	7.82	8.09	8.35	8.56	8.76	8.97	9.17	9.38	9.80	10.00	10.42	11.11
UNPAVED ROAD DUST	11.37	10.82	10.69	10.41	10.44	10.24	10.28	10.32	10.35	10.39	10.42	10.53	10.58	10.69	10.89
FUGITIVE WINDBLOWN DUST	15.24	13.96	13.45	13.22	13.18	12.47	12.43	12.39	12.35	12.31	12.27	12.20	12.16	12.09	12.04
FIRES	0.15	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.19	0.19	0.20	0.21
MANAGED BURNING AND DISPOSAL	16.60	16.48	16.44	16.37	16.33	16.30	16.26	16.23	16.19	16.15	16.11	16.03	15.99	15.90	15.80
COOKING	1.22	1.24	1.25	1.29	1.31	1.33	1.35	1.37	1.39	1.41	1.43	1.47	1.49	1.53	1.60
OTHER (MISCELLANEOUS PROCESSES)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Area-Wide Subtotal	**83.55**	**78.04**	**76.44**	**75.44**	**75.94**	**73.30**	**73.36**	**73.66**	**73.96**	**74.26**	**74.58**	**75.26**	**75.59**	**76.26**	**77.27**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	0.77	0.77	0.78	0.80	0.83	0.86	0.89	0.90	0.92	0.93	0.95	0.99	1.00	1.05	1.15
LIGHT DUTY TRUCKS - 1 (LDT1)	0.27	0.27	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.32	0.33	0.36
LIGHT DUTY TRUCKS - 2 (LDT2)	0.54	0.65	0.66	0.68	0.71	0.74	0.77	0.79	0.81	0.82	0.84	0.88	0.89	0.93	1.04
MEDIUM DUTY TRUCKS (MDV)	0.24	0.35	0.35	0.37	0.39	0.41	0.43	0.44	0.46	0.47	0.48	0.50	0.51	0.54	0.60
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.07
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.56	0.63	0.62	0.56	0.56	0.55	0.53	0.51	0.49	0.47	0.45	0.42	0.41	0.39	0.38
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	8.92	9.01	10.81	8.69	8.13	7.56	7.01	6.48	5.96	5.47	5.00	4.17	3.81	3.23	2.68
MOTORCYCLES (MCY)	0.02	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
OTHER BUSES (OB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MOTOR HOMES (MH)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
On-Road Subtotal	**11.56**	**12.05**	**13.86**	**11.70**	**11.23**	**10.74**	**10.27**	**9.77**	**9.28**	**8.81**	**8.38**	**7.62**	**7.30**	**6.82**	**6.58**
Other Mobile															
AIRCRAFT	1.33	1.36	1.43	2.02	2.08	2.19	2.31	2.35	2.39	2.44	2.48	2.57	2.62	2.72	2.72
TRAINS	0.60	0.60	0.59	0.54	0.54	0.54	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.54	0.54
SHIPS AND COMMERCIAL BOATS	0.07	0.06	0.07	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05
RECREATIONAL BOATS	0.71	0.79	0.83	0.92	0.97	1.02	1.08	1.14	1.20	1.27	1.33	1.48	1.55	1.70	1.98
OFF-ROAD RECREATIONAL VEHICLES	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.09
OFF-ROAD EQUIPMENT	3.81	3.52	3.41	2.99	2.81	2.64	2.46	2.26	2.07	1.89	1.73	1.43	1.31	1.10	0.91
FARM EQUIPMENT	4.03	3.63	3.48	3.03	2.89	2.79	2.64	2.42	2.19	1.99	1.82	1.50	1.34	1.06	0.73
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**10.60**	**10.02**	**9.85**	**9.60**	**9.38**	**9.27**	**9.11**	**8.79**	**8.47**	**8.21**	**7.99**	**7.61**	**7.47**	**7.24**	**7.02**
Grand Total	**94.16**	**88.01**	**86.22**	**84.95**	**85.23**	**82.46**	**82.37**	**82.36**	**82.34**	**82.38**	**82.48**	**82.80**	**82.99**	**83.44**	**84.22**

PM2.5 - SJV															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-2.55	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.01	-0.02	-0.03	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01	0.00
Idling	0.00	-0.03	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	-0.02	-0.02	-0.01	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.04	-0.05	-0.06	-0.08
Moyer	0.00	-0.06	-0.05	-0.05	-0.05	-0.05	-0.05	-0.06	-0.06	-0.05	-0.05	-0.03	-0.03	0.00	0.00
Off-road	0.00	-0.01	-0.01	-0.08	-0.13	-0.18	-0.21	-0.23	-0.23	-0.23	-0.23	-0.21	-0.19	-0.17	-0.09
Ships	0.00	0.00	0.00	-0.03	-0.03	-0.04	-0.04	-0.04	-0.05	-0.05	-0.05	-0.06	-0.06	-0.07	-0.08
Summary	**0.00**	**-2.65**	**-0.11**	**-0.23**	**-0.29**	**-0.36**	**-0.38**	**-0.41**	**-0.41**	**-0.41**	**-0.40**	**-0.37**	**-0.35**	**-0.31**	**-0.26**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

SOX - SJV - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.89	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.92	0.92	0.92	1.01	1.06	1.16	1.22
COGENERATION	0.71	0.75	0.78	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.78	0.78	0.77
OIL AND GAS PRODUCTION (COMBUSTION)	2.05	2.25	2.35	2.26	2.25	2.24	2.25	2.25	2.26	2.27	2.28	2.32	2.35	2.39	2.49
PETROLEUM REFINING (COMBUSTION)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
MANUFACTURING AND INDUSTRIAL	6.27	6.82	6.89	7.06	7.14	7.29	7.44	7.58	7.73	7.88	8.02	8.14	8.20	8.32	8.52
FOOD AND AGRICULTURAL PROCESSING	2.55	2.53	2.52	2.50	2.49	2.48	2.47	2.47	2.46	2.45	2.44	2.43	2.42	2.41	2.40
SERVICE AND COMMERCIAL	0.87	0.90	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.92	0.92	0.91	0.90	0.90	0.89
OTHER (FUEL COMBUSTION)	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.08
INCINERATORS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.19	0.22	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.26	0.26
PETROLEUM REFINING	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.93	0.97	0.99	1.02	1.04	1.06	1.08	1.09	1.11	1.13	1.14	1.17	1.19	1.23	1.28
FOOD AND AGRICULTURE	0.79	0.79	0.79	0.79	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81	0.81	0.82	0.82
MINERAL PROCESSES	1.47	1.53	1.55	1.61	1.64	1.67	1.70	1.74	1.77	1.80	1.83	1.89	1.92	1.98	2.07
METAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
WOOD AND PAPER	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
GLASS AND RELATED PRODUCTS	3.70	3.79	3.81	3.99	4.07	4.17	4.26	4.34	4.44	4.52	4.63	4.79	4.87	5.03	5.29
OTHER (INDUSTRIAL PROCESSES)	0.22	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.26	0.26	0.26	0.27	0.28	0.28	0.29
Stationary Subtotal	**21.15**	**22.20**	**22.46**	**22.81**	**23.02**	**23.32**	**23.62**	**23.91**	**24.21**	**24.51**	**24.82**	**25.34**	**25.60**	**26.12**	**26.87**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	1.15	1.15	1.15	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.13	1.13	1.13	1.13
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**1.21**	**1.20**	**1.20**	**1.20**	**1.20**	**1.20**	**1.20**	**1.20**	**1.19**	**1.19**	**1.19**	**1.19**	**1.19**	**1.18**	**1.18**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	0.26	0.18	0.18	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.25
LIGHT DUTY TRUCKS - 1 (LDT1)	0.12	0.09	0.09	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09
LIGHT DUTY TRUCKS - 2 (LDT2)	0.13	0.11	0.11	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.14	0.15
MEDIUM DUTY TRUCKS (MDV)	0.09	0.09	0.09	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.02	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.18	0.23	0.23	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.47	1.76	2.20	0.22	0.23	0.23	0.24	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.33
MOTORCYCLES (MCY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.02	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER BUSES (OB)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTOR HOMES (MH)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-Road Subtotal	**2.36**	**2.62**	**3.04**	**0.71**	**0.73**	**0.75**	**0.77**	**0.78**	**0.80**	**0.82**	**0.84**	**0.89**	**0.91**	**0.95**	**1.02**
Other Mobile															
AIRCRAFT	0.42	0.45	0.45	0.50	0.51	0.52	0.54	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.61
TRAINS	0.68	0.71	0.73	0.07	0.07	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SHIPS AND COMMERCIAL BOATS	0.25	0.31	0.33	0.12	0.13	0.08	0.08	0.09	0.09	0.10	0.10	0.12	0.12	0.14	0.16
RECREATIONAL BOATS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OFF-ROAD RECREATIONAL VEHICLES	0.08	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.11	0.11	0.13
OFF-ROAD EQUIPMENT	0.46	0.48	0.49	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
FARM EQUIPMENT	0.51	0.51	0.51	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**2.41**	**2.53**	**2.58**	**0.87**	**0.89**	**0.86**	**0.83**	**0.84**	**0.86**	**0.88**	**0.90**	**0.93**	**0.95**	**0.99**	**1.05**
Grand Total	**3.63**	**3.74**	**3.79**	**2.07**	**2.10**	**2.06**	**2.03**	**2.04**	**2.06**	**2.07**	**2.09**	**2.12**	**2.14**	**2.18**	**2.23**

SOX - SJV															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.50	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	-0.25	-0.27	-0.34	-0.37	-0.39	-0.41	-0.44	-0.47	-0.53	-0.56	-0.63	-0.75
Summary	**0.00**	**-0.50**	**0.00**	**-0.25**	**-0.27**	**-0.34**	**-0.37**	**-0.39**	**-0.41**	**-0.44**	**-0.47**	**-0.53**	**-0.56**	**-0.63**	**-0.75**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Southern Mountain Counties

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NOX - Southern Mountain Counties - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
COGENERATION	0.32	0.29	0.29	0.29	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.34	0.37
MANUFACTURING AND INDUSTRIAL	0.27	0.28	0.29	0.29	0.30	0.31	0.31	0.31	0.31	0.32	0.32	0.34	0.34	0.34	0.36
SERVICE AND COMMERCIAL	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06
OTHER (FUEL COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**1.09**	**1.08**	**1.09**	**1.10**	**1.13**	**1.13**	**1.14**	**1.14**	**1.14**	**1.14**	**1.15**	**1.19**	**1.19**	**1.19**	**1.23**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**3.17**	**3.17**	**3.17**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**	**3.16**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	0.86	0.64	0.61	0.55	0.51	0.48	0.44	0.40	0.37	0.34	0.30	0.25	0.23	0.20	0.15
LIGHT DUTY TRUCKS - 1 (LDT1)	1.21	0.92	0.90	0.84	0.81	0.78	0.75	0.72	0.68	0.65	0.62	0.55	0.52	0.44	0.33
LIGHT DUTY TRUCKS - 2 (LDT2)	0.60	0.59	0.56	0.51	0.48	0.45	0.42	0.39	0.37	0.34	0.31	0.27	0.25	0.22	0.18
MEDIUM DUTY TRUCKS (MDV)	0.26	0.33	0.32	0.30	0.29	0.28	0.27	0.26	0.24	0.23	0.22	0.19	0.18	0.16	0.13
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.04	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.13
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.07	0.07	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.27	0.23	0.17	0.16	0.14	0.12	0.11	0.11	0.10	0.09	0.08	0.08	0.07	0.06
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.09	0.13	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.08	0.07	0.07	0.06	0.05
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.22	0.23	0.23	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.14	0.13	0.11	0.09
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.05	0.07	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.05	0.05	0.04
MOTORCYCLES (MCY)	0.02	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06
OTHER BUSES (OB)	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
MOTOR HOMES (MH)	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.04
On-Road Subtotal	**3.79**	**3.67**	**3.57**	**3.30**	**3.16**	**3.01**	**2.86**	**2.72**	**2.58**	**2.44**	**2.30**	**2.05**	**1.94**	**1.73**	**1.45**
Other Mobile															
AIRCRAFT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TRAINS	0.47	0.38	0.36	0.34	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.36	0.37	0.37	0.39
RECREATIONAL BOATS	1.69	2.18	2.32	2.44	2.43	2.42	2.42	2.42	2.42	2.43	2.45	2.48	2.50	2.52	2.54
OFF-ROAD RECREATIONAL VEHICLES	0.05	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.11	0.12
OFF-ROAD EQUIPMENT	2.30	2.17	2.10	1.92	1.83	1.74	1.66	1.57	1.49	1.40	1.30	1.13	1.06	0.93	0.79
FARM EQUIPMENT	0.53	0.48	0.46	0.42	0.40	0.39	0.37	0.34	0.32	0.30	0.28	0.23	0.21	0.18	0.14
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD SUB-TOTAL	**5.04**	**5.29**	**5.33**	**5.21**	**5.09**	**4.97**	**4.87**	**4.77**	**4.67**	**4.58**	**4.48**	**4.32**	**4.25**	**4.13**	**4.00**
TOTAL INVENTORY	**13.10**	**13.22**	**13.15**	**12.77**	**12.55**	**12.28**	**12.03**	**11.79**	**11.55**	**11.32**	**11.10**	**10.72**	**10.54**	**10.21**	**9.84**

NOX - Southern Mountain Counties															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.02	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.01**	**-0.04**	**-0.01**	**-0.02**	**-0.03**	**-0.04**	**-0.04**	**-0.05**	**-0.05**	**-0.05**	**-0.04**	**-0.04**	**-0.04**	**-0.03**	**-0.03**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Southern Mountain Counties - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
SERVICE AND COMMERCIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (FUEL COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.15	0.15
COATINGS AND RELATED PROCESS SOLVENTS	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.13
ADHESIVES AND SEALANTS	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04
PETROLEUM MARKETING	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.18
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
Stationary Subtotal	**0.51**	**0.51**	**0.50**	**0.51**	**0.52**	**0.52**	**0.53**	**0.53**	**0.53**	**0.54**	**0.54**	**0.56**	**0.57**	**0.57**	**0.59**
Area-Wide															
CONSUMER PRODUCTS	0.56	0.50	0.50	0.48	0.48	0.48	0.48	0.49	0.49	0.50	0.50	0.51	0.51	0.52	0.53
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVEN	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.35
PESTICIDES/FERTILIZERS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
ASPHALT PAVING / ROOFING	1.09	1.11	1.12	1.13	1.13	1.14	1.14	1.15	1.15	1.16	1.16	1.16	1.16	1.17	1.17
RESIDENTIAL FUEL COMBUSTION	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25
FARMING OPERATIONS	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
COOKING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Area-Wide Subtotal	**11.77**	**11.74**	**11.75**	**11.73**	**11.74**	**11.75**	**11.76**	**11.77**	**11.78**	**11.80**	**11.81**	**11.83**	**11.84**	**11.86**	**11.88**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.32	1.00	0.94	0.83	0.77	0.70	0.64	0.59	0.54	0.49	0.45	0.37	0.34	0.30	0.24
LIGHT DUTY TRUCKS - 1 (LDT1)	1.44	1.18	1.17	1.12	1.09	1.06	1.03	1.01	0.98	0.94	0.91	0.83	0.80	0.72	0.59
LIGHT DUTY TRUCKS - 2 (LDT2)	0.55	0.54	0.52	0.47	0.45	0.43	0.40	0.38	0.36	0.34	0.32	0.29	0.28	0.26	0.25
MEDIUM DUTY TRUCKS (MDV)	0.18	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.17	0.16	0.16	0.14	0.13
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.10	0.11	0.09	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.11	0.10	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.13	0.10	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.02	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.08	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.02	0.02	0.02	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
MOTORCYCLES (MCY)	0.15	0.22	0.22	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.20	0.20	0.20	0.21	0.23
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
MOTOR HOMES (MH)	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
On-Road Subtotal	**4.14**	**3.63**	**3.49**	**3.20**	**3.05**	**2.90**	**2.76**	**2.63**	**2.50**	**2.37**	**2.26**	**2.06**	**1.96**	**1.80**	**1.59**
Other Mobile															
AIRCRAFT	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
TRAINS	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
RECREATIONAL BOATS	8.34	7.76	7.54	7.05	6.77	6.52	6.32	6.14	5.99	5.86	5.74	5.54	5.46	5.31	5.24
OFF-ROAD RECREATIONAL VEHICLES	2.31	2.86	3.02	3.22	3.32	3.42	3.54	3.66	3.78	3.91	4.04	4.33	4.49	4.81	5.35
OFF-ROAD EQUIPMENT	0.75	0.69	0.65	0.59	0.57	0.54	0.52	0.49	0.48	0.46	0.44	0.41	0.40	0.39	0.38
FARM EQUIPMENT	0.11	0.10	0.09	0.08	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03
FUEL STORAGE AND HANDLING	0.11	0.11	0.10	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03
OFF-ROAD SUB-TOTAL	**11.71**	**11.60**	**11.50**	**11.10**	**10.88**	**10.71**	**10.59**	**10.50**	**10.44**	**10.42**	**10.41**	**10.46**	**10.52**	**10.67**	**11.11**
TOTAL INVENTORY	**28.12**	**27.48**	**27.24**	**26.55**	**26.20**	**25.89**	**25.63**	**25.43**	**25.26**	**25.12**	**25.02**	**24.90**	**24.89**	**24.90**	**25.17**

ROG - Southern Mountain Counties															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.03
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.00**	**0.00**	**0.00**	**-0.02**	**-0.02**	**-0.02**	**-0.03**	**-0.03**	**-0.03**	**-0.03**	**-0.04**	**-0.04**	**-0.04**	**-0.05**	**-0.05**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Statewide

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NOX - STWD - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	33.64	37.38	37.54	37.75	38.07	38.52	38.33	38.51	38.69	38.88	39.07	40.41	41.12	42.47	44.48
COGENERATION	27.76	27.63	27.23	25.01	25.41	25.77	25.93	26.07	26.20	26.33	26.47	26.92	27.13	27.57	28.00
OIL AND GAS PRODUCTION (COMBUSTION)	29.44	25.37	25.47	24.96	25.40	25.41	25.56	25.74	25.93	26.08	26.26	26.58	26.73	27.05	27.69
PETROLEUM REFINING (COMBUSTION)	29.17	24.60	24.72	24.05	24.02	24.09	24.23	24.42	24.61	24.79	24.98	25.37	25.56	25.97	26.59
MANUFACTURING AND INDUSTRIAL	102.72	106.06	106.80	108.03	108.94	109.82	111.08	112.55	114.01	115.51	117.06	119.59	120.78	123.17	126.34
FOOD AND AGRICULTURAL PROCESSING	52.48	50.48	48.35	38.92	36.09	33.28	31.08	28.96	26.80	24.64	22.51	21.57	21.11	20.07	18.44
SERVICE AND COMMERCIAL	51.30	51.48	51.05	50.14	49.83	48.75	48.44	48.04	47.67	47.33	47.21	47.17	47.15	47.14	47.58
OTHER (FUEL COMBUSTION)	22.11	19.49	18.91	17.74	17.18	16.54	16.13	15.72	15.32	14.91	14.49	13.92	13.65	13.07	13.52
SEWAGE TREATMENT	0.36	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.43	0.44	0.45	0.46
LANDFILLS	0.98	1.01	1.03	1.07	1.08	1.10	1.12	1.13	1.15	1.17	1.19	1.22	1.23	1.26	1.31
INCINERATORS	1.70	1.87	1.90	1.90	1.92	1.92	1.90	1.91	1.93	1.94	1.95	1.98	1.99	2.02	2.07
SOIL REMEDIATION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
OTHER (WASTE DISPOSAL)	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12
PRINTING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.14	0.15	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20
OIL AND GAS PRODUCTION	2.56	2.77	2.89	2.85	2.84	2.81	2.77	2.77	2.77	2.76	2.76	2.76	2.75	2.75	2.74
PETROLEUM REFINING	7.61	7.80	7.98	7.44	7.32	7.34	7.40	7.24	7.26	7.29	7.33	7.39	7.41	7.48	7.57
PETROLEUM MARKETING	0.18	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.19	0.20
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	1.75	1.85	1.86	1.94	1.97	2.01	2.04	2.08	2.11	2.15	2.19	2.26	2.30	2.36	2.47
FOOD AND AGRICULTURE	8.93	8.66	8.71	8.84	8.72	8.60	8.48	8.45	8.43	8.41	8.45	8.54	8.65	8.92	8.85
MINERAL PROCESSES	55.52	58.13	58.94	60.78	61.73	62.68	63.72	64.72	65.81	66.84	67.92	69.82	70.78	72.69	75.56
METAL PROCESSES	1.22	1.21	1.12	1.05	1.06	1.08	1.09	1.11	1.13	1.14	1.16	1.20	1.21	1.24	1.29
WOOD AND PAPER	2.06	2.10	2.09	2.21	2.25	2.32	2.37	2.40	2.47	2.49	2.55	2.66	2.68	2.79	2.92
GLASS AND RELATED PRODUCTS	11.20	11.04	9.30	9.76	9.97	10.22	10.47	10.68	10.96	11.18	11.45	11.84	12.08	12.47	13.14
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (INDUSTRIAL PROCESSES)	6.64	6.83	7.05	7.21	7.26	7.36	7.45	7.51	7.62	7.72	7.83	8.00	8.11	8.28	8.55
Stationary Subtotal	**449.67**	**446.68**	**443.87**	**432.60**	**432.03**	**430.61**	**430.59**	**431.04**	**431.88**	**432.61**	**433.90**	**440.29**	**443.53**	**449.89**	**460.28**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	44.68	43.27	41.84	42.11	42.37	39.45	39.67	39.89	40.12	40.35	38.62	39.03	39.20	39.70	40.08
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.27
MANAGED BURNING AND DISPOSAL	22.74	23.78	24.12	24.81	25.16	25.51	25.48	25.46	25.43	25.41	25.38	25.33	25.30	25.25	25.19
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09
Area-Wide Subtotal	**67.71**	**67.36**	**66.27**	**67.24**	**67.85**	**65.28**	**65.48**	**65.68**	**65.88**	**66.09**	**64.34**	**64.69**	**64.84**	**65.30**	**65.63**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	357.60	245.60	219.12	180.95	165.22	150.20	136.32	123.86	112.70	102.63	93.88	79.37	73.25	63.68	52.40
LIGHT DUTY TRUCKS - 1 (LDT1)	126.28	89.11	81.82	70.91	66.20	61.59	57.33	53.34	49.57	45.93	42.46	36.05	33.12	28.26	22.15
LIGHT DUTY TRUCKS - 2 (LDT2)	232.82	184.89	166.15	140.57	131.20	122.65	114.71	107.17	100.00	93.22	86.84	75.51	70.48	61.87	51.72
MEDIUM DUTY TRUCKS (MDV)	111.32	99.39	90.05	76.53	71.79	67.52	63.78	60.11	56.54	53.10	49.79	43.63	40.79	35.59	29.03
LIGHT HEAVY DUTY GAS TRUCKS	45.49	41.73	36.39	31.99	31.30	30.69	30.13	29.72	29.35	29.03	28.77	28.15	27.89	27.50	26.63
LIGHT HEAVY DUTY GAS TRUCKS	11.01	10.25	9.50	8.87	8.75	8.59	8.40	8.25	8.09	7.93	7.76	7.41	7.26	7.01	6.68
MEDIUM HEAVY DUTY GAS TRUCI	20.05	18.87	17.01	14.83	14.21	13.53	12.78	12.02	11.27	10.53	9.83	8.50	7.90	6.88	5.62
HEAVY HEAVY DUTY GAS TRUCKS	25.42	23.65	20.96	17.46	16.34	15.19	14.16	13.10	12.09	11.17	10.32	8.80	8.15	7.08	6.02
LIGHT HEAVY DUTY DIESEL TRUCI	1.97	40.90	35.20	27.78	26.46	24.28	22.43	20.98	19.86	18.90	18.03	16.22	15.37	13.90	11.80
LIGHT HEAVY DUTY DIESEL TRUCI	21.24	28.38	25.84	22.45	21.87	20.56	19.28	18.12	17.08	16.04	15.08	13.27	12.41	10.85	8.89
MEDIUM HEAVY DUTY DIESEL TRU	164.39	175.35	158.38	135.99	130.20	121.52	112.07	103.30	94.91	86.86	79.48	66.58	60.84	51.11	40.26
HEAVY HEAVY DUTY DIESEL TRUC	675.46	723.78	835.33	691.21	658.69	613.13	569.47	525.79	482.56	441.70	403.55	337.00	309.47	264.58	221.62
MOTORCYCLES (MCY)	6.06	10.70	10.78	10.87	10.88	10.92	10.95	11.04	11.15	11.25	11.38	11.57	11.69	12.00	12.24
HEAVY DUTY DIESEL URBAN BUSE	33.00	30.12	29.44	29.19	29.15	29.15	29.14	29.03	28.61	27.76	27.65	26.92	26.37	25.58	25.27
HEAVY DUTY GAS URBAN BUSES (	1.94	1.78	1.81	1.84	1.85	1.88	1.90	1.92	1.97	2.05	2.08	2.12	2.15	2.21	2.25
SCHOOL BUSES (SB)	13.71	13.81	13.78	13.80	13.91	14.05	14.03	13.99	13.94	13.90	13.83	13.68	13.60	13.42	13.10
OTHER BUSES (OB)	9.78	10.41	10.19	9.47	9.14	8.59	8.06	7.55	7.07	6.60	6.16	5.37	4.99	4.33	3.51
MOTOR HOMES (MH)	12.05	10.50	10.08	9.32	8.96	8.55	8.10	7.67	7.23	6.78	6.37	5.58	5.21	4.51	3.62
On-Road Subtotal	**1869.57**	**1759.21**	**1771.83**	**1494.04**	**1416.12**	**1322.58**	**1233.04**	**1146.98**	**1063.97**	**985.37**	**913.25**	**785.72**	**730.94**	**640.37**	**542.81**
Other Mobile															
AIRCRAFT	46.85	53.63	56.03	61.29	63.52	65.99	67.76	69.40	71.07	72.68	74.56	77.74	79.33	82.91	87.99
TRAINS	188.16	157.56	148.57	141.32	139.95	116.36	120.88	123.28	124.87	126.54	128.32	132.17	134.23	138.64	145.99
SHIPS AND COMMERCIAL BOATS	291.10	318.42	326.72	342.22	351.72	361.75	371.56	382.35	394.16	406.90	420.16	453.09	471.01	511.99	591.36
RECREATIONAL BOATS	40.29	52.35	55.76	58.71	58.46	58.33	58.30	58.39	58.59	58.90	59.31	60.32	60.82	61.55	62.36
OFF-ROAD RECREATIONAL VEHICI	1.71	1.94	2.04	2.14	2.15	2.20	2.26	2.32	2.38	2.45	2.53	2.69	2.78	2.96	3.20
OFF-ROAD EQUIPMENT	611.98	565.16	547.42	497.28	472.49	444.67	423.08	401.17	378.60	357.17	334.04	294.16	276.47	245.95	213.31
FARM EQUIPMENT	162.41	146.23	140.84	127.10	121.37	116.70	110.55	102.85	95.31	88.84	82.31	70.03	64.21	53.95	41.52
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**1342.50**	**1295.29**	**1277.38**	**1230.05**	**1209.67**	**1166.01**	**1154.39**	**1139.76**	**1124.98**	**1113.48**	**1101.22**	**1090.20**	**1088.86**	**1097.96**	**1145.74**
Grand Total	**3729.45**	**3568.54**	**3559.34**	**3223.93**	**3125.67**	**2984.48**	**2883.50**	**2783.46**	**2686.71**	**2597.55**	**2512.71**	**2380.90**	**2328.17**	**2253.51**	**2214.46**

NOX - STWD															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-214.17	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-2.37	-30.06	-38.31	-38.46	-35.06	-31.65	-28.38	-25.18	-22.21	-19.23	-16.44	-11.13	-8.88	-5.43	-2.39
Public Fleet	0.00	0.00	-0.05	-0.29	-0.41	-0.53	-0.49	-0.45	-0.42	-0.38	-0.34	-0.28	-0.24	-0.18	-0.08
Idling	0.00	-5.31	-14.28	-32.21	-33.32	-34.43	-35.72	-37.00	-38.27	-39.54	-40.80	-42.86	-43.83	-45.70	-48.74
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.06	-0.08	-0.10	-0.14	-0.16	-0.20	-0.26
Moyer	-5.15	-6.85	-5.80	-3.70	-4.69	-5.65	-6.60	-6.60	-6.60	-6.60	-5.90	-4.50	-3.20	0.00	0.00
Off-road	0.00	-0.83	-1.27	-4.66	-7.72	-16.20	-16.25	-16.73	-17.12	-16.22	-15.30	-13.69	-13.11	-12.26	-10.65
Ships	0.00	0.00	0.00	-3.03	-3.21	-3.45	-3.65	-3.86	-4.10	-4.37	-4.65	-5.28	-5.64	-6.48	-8.10
SJV Adjustments	5.53	5.53	5.40	-1.93	-3.92	-5.89	-7.11	-8.24	-9.34	-10.39	-11.43	-10.02	-9.29	-7.75	-5.31
Summary	**-2.00**	**-251.69**	**-54.31**	**-84.29**	**-88.33**	**-97.81**	**-98.21**	**-98.10**	**-98.11**	**-96.80**	**-94.96**	**-87.90**	**-84.36**	**-77.99**	**-75.53**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - STWD - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	4.91	4.69	4.84	5.32	5.17	5.18	5.20	5.26	5.30	5.35	5.39	5.59	5.68	5.87	6.07
COGENERATION	3.36	3.46	3.51	3.54	3.56	3.59	3.57	3.60	3.62	3.64	3.66	3.70	3.73	3.77	3.83
OIL AND GAS PRODUCTION (COMBUSTION)	4.45	4.70	4.82	4.68	4.69	4.66	4.65	4.65	4.64	4.64	4.63	4.66	4.67	4.70	4.77
PETROLEUM REFINING (COMBUSTION)	1.98	1.83	1.84	1.85	1.85	1.86	1.86	1.87	1.87	1.88	1.88	1.89	1.90	1.91	1.93
MANUFACTURING AND INDUSTRIAL	3.69	3.81	3.89	4.00	4.07	4.12	4.17	4.22	4.27	4.32	4.38	4.45	4.49	4.56	4.69
FOOD AND AGRICULTURAL PROCESSING	4.47	4.41	4.35	4.32	4.31	4.30	4.29	4.28	4.27	4.26	4.25	4.23	4.22	4.21	4.19
SERVICE AND COMMERCIAL	3.92	4.03	4.08	4.15	4.19	4.23	4.26	4.29	4.33	4.36	4.40	4.45	4.48	4.53	4.63
OTHER (FUEL COMBUSTION)	2.36	2.02	1.93	1.75	1.67	1.58	1.52	1.46	1.39	1.33	1.27	1.18	1.14	1.06	1.08
SEWAGE TREATMENT	0.62	0.65	0.66	0.68	0.69	0.70	0.70	0.71	0.72	0.73	0.73	0.75	0.76	0.77	0.79
LANDFILLS	8.05	8.43	8.54	8.76	8.88	8.99	9.10	9.22	9.33	9.44	9.55	9.75	9.85	10.04	10.35
INCINERATORS	0.10	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14
SOIL REMEDIATION	0.30	0.31	0.31	0.32	0.33	0.34	0.34	0.35	0.35	0.36	0.37	0.38	0.38	0.39	0.40
OTHER (WASTE DISPOSAL)	64.29	65.56	67.67	70.99	71.39	72.22	72.98	73.58	77.00	80.49	81.26	82.89	84.01	86.29	89.67
LAUNDERING	0.63	0.67	0.68	0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80	0.82	0.85
DEGREASING	53.30	31.69	31.93	32.63	33.17	33.60	33.95	34.31	34.66	35.01	35.36	36.04	36.37	37.04	38.08
COATINGS AND RELATED PROCESS SOLVENTS	72.80	72.09	72.01	70.47	71.93	73.26	74.48	75.69	76.90	78.28	79.55	81.63	82.77	84.84	88.09
PRINTING	17.21	17.48	15.74	16.23	16.47	16.72	16.94	17.17	17.39	17.62	17.84	18.30	18.52	18.98	19.68
ADHESIVES AND SEALANTS	22.46	22.30	22.39	22.71	22.86	23.03	23.09	23.15	23.21	23.26	23.32	23.47	23.47	23.64	24.04
OTHER (CLEANING AND SURFACE COATINGS)	5.68	5.31	5.49	5.79	5.94	6.09	6.22	6.36	6.50	6.64	6.77	7.02	7.14	7.38	7.74
OIL AND GAS PRODUCTION	42.49	39.71	40.03	38.85	38.48	38.09	37.79	37.48	37.17	36.87	36.57	36.13	35.91	35.46	35.03
PETROLEUM REFINING	19.29	18.36	16.48	16.73	16.88	17.03	17.19	17.19	17.36	17.52	17.68	18.02	18.19	18.54	19.07
PETROLEUM MARKETING	81.89	79.17	78.79	78.44	78.56	79.36	80.25	81.15	82.05	82.99	83.88	85.90	86.92	88.86	91.95
OTHER (PETROLEUM PRODUCTION AND MARKET	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
CHEMICAL	22.82	21.44	22.12	22.77	23.25	23.89	24.34	24.79	25.25	25.69	26.15	26.99	27.40	28.23	29.77
FOOD AND AGRICULTURE	20.06	20.30	20.50	20.99	21.24	21.50	21.77	22.05	22.33	22.61	22.92	23.56	23.90	24.56	25.65
MINERAL PROCESSES	4.09	4.26	4.34	4.49	4.55	4.62	4.69	4.75	4.83	4.90	4.98	5.13	5.18	5.31	5.52
METAL PROCESSES	0.60	0.60	0.60	0.62	0.63	0.64	0.65	0.66	0.67	0.69	0.70	0.72	0.72	0.73	0.76
WOOD AND PAPER	3.05	3.09	3.07	3.23	3.30	3.37	3.45	3.52	3.59	3.67	3.72	3.87	3.92	4.07	4.26
GLASS AND RELATED PRODUCTS	0.38	0.39	0.39	0.40	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.51	0.53
ELECTRONICS	0.82	0.87	0.89	0.93	0.95	0.97	0.98	1.00	1.01	1.03	1.04	1.06	1.07	1.10	1.13
OTHER (INDUSTRIAL PROCESSES)	14.24	14.62	14.77	14.61	14.76	14.93	15.08	15.22	15.36	15.51	15.66	15.96	16.11	16.42	16.85
Stationary Subtotal	**484.40**	**456.45**	**456.88**	**461.19**	**465.12**	**470.21**	**474.92**	**479.39**	**486.80**	**494.55**	**499.39**	**509.25**	**514.45**	**524.80**	**541.65**
Area-Wide															
CONSUMER PRODUCTS	260.06	236.70	236.98	229.70	232.10	234.24	236.68	239.11	241.60	244.03	246.51	251.34	253.74	258.58	265.52
ARCHITECTURAL COATINGS AND RELATED PRO	135.24	116.08	101.32	98.47	99.38	100.28	101.26	102.23	103.20	104.17	105.16	107.26	108.28	110.36	113.67
PESTICIDES/FERTILIZERS	67.16	64.07	62.78	60.26	58.98	57.74	57.83	57.92	58.01	58.10	58.19	58.52	58.68	59.02	59.84
ASPHALT PAVING / ROOFING	37.18	37.93	38.24	38.58	38.76	38.96	39.14	39.32	39.50	39.68	39.86	40.14	40.28	40.55	40.97
RESIDENTIAL FUEL COMBUSTION	11.69	11.71	11.78	11.82	11.84	11.85	11.89	11.93	11.97	12.02	12.07	12.20	12.26	12.43	12.59
FARMING OPERATIONS	115.33	116.58	116.60	118.24	119.26	119.73	121.13	122.55	123.97	125.41	126.87	129.80	131.28	134.26	138.77
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.69	0.70	0.71	0.72	0.72	0.73	0.73	0.73	0.74	0.74	0.75	0.76	0.76	0.77	0.79
MANAGED BURNING AND DISPOSAL	58.55	60.00	60.49	61.47	61.96	62.46	62.41	62.36	62.31	62.26	62.21	62.11	62.06	61.96	61.84
COOKING	6.46	6.72	6.80	7.01	7.12	7.23	7.34	7.45	7.55	7.66	7.77	7.96	8.05	8.24	8.53
OTHER (MISCELLANEOUS PROCESSES)	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10
Area-Wide Subtotal	**692.42**	**650.57**	**635.79**	**626.33**	**630.20**	**633.30**	**638.49**	**643.69**	**648.94**	**654.17**	**659.47**	**670.17**	**675.49**	**686.26**	**702.61**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	455.40	338.94	301.92	248.27	227.36	206.87	188.87	172.68	158.73	146.37	135.98	119.09	111.68	100.23	86.67
LIGHT DUTY TRUCKS - 1 (LDT1)	129.52	101.96	94.58	83.49	78.45	73.45	69.53	65.73	62.02	58.33	54.95	48.46	45.41	40.99	35.38
LIGHT DUTY TRUCKS - 2 (LDT2)	154.51	134.23	122.94	108.89	104.65	101.00	97.40	93.94	90.56	87.27	84.29	79.00	76.51	72.58	68.15
MEDIUM DUTY TRUCKS (MDV)	67.59	61.67	56.54	50.12	48.34	46.86	45.80	44.63	43.47	42.38	41.28	39.18	38.10	35.85	32.72
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LH	39.70	35.23	29.22	22.68	21.19	20.05	19.18	18.42	17.77	17.26	16.83	16.08	15.74	15.05	13.88
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LH	11.24	10.28	9.26	7.95	7.55	7.14	6.74	6.38	6.01	5.63	5.29	4.75	4.48	4.00	3.39
MEDIUM HEAVY DUTY GAS TRUCKS (MH	24.21	20.05	17.46	14.07	12.92	11.86	10.81	9.80	8.89	7.97	7.18	5.83	5.20	4.30	3.52
HEAVY HEAVY DUTY GAS TRUCKS (HHD	12.27	11.23	9.79	7.91	7.33	6.72	6.19	5.55	4.95	4.45	3.97	3.17	2.83	2.24	1.66
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (	0.08	1.13	1.03	0.92	0.91	0.88	0.86	0.84	0.83	0.82	0.81	0.78	0.76	0.73	0.68
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (	0.70	0.96	0.92	0.88	0.88	0.86	0.84	0.82	0.80	0.78	0.75	0.70	0.67	0.62	0.55
MEDIUM HEAVY DUTY DIESEL TRUCKS (	2.93	3.47	3.27	3.03	3.00	2.93	2.86	2.77	2.68	2.60	2.52	2.36	2.29	2.19	2.09
HEAVY HEAVY DUTY DIESEL TRUCKS (H	51.38	56.10	65.08	55.87	53.23	50.33	47.73	44.96	42.14	39.40	36.79	32.12	30.12	26.80	23.66
MOTORCYCLES (MCY)	33.52	50.25	48.00	44.96	43.83	43.01	42.34	42.05	41.95	41.88	42.02	42.28	42.60	43.47	44.11
HEAVY DUTY DIESEL URBAN BUSES (UB)	1.15	1.11	1.09	1.08	1.08	1.08	1.08	1.08	1.07	1.06	1.06	1.04	1.03	1.01	1.00
HEAVY DUTY GAS URBAN BUSES (UB)	1.20	1.14	1.15	1.13	1.12	1.13	1.14	1.14	1.17	1.24	1.26	1.30	1.33	1.34	1.35
SCHOOL BUSES (SB)	1.29	1.16	1.09	1.05	1.05	1.06	1.06	1.05	1.02	0.99	0.98	0.97	0.95	0.93	0.90
OTHER BUSES (OB)	2.04	1.82	1.71	1.55	1.49	1.43	1.38	1.32	1.26	1.20	1.14	1.03	0.97	0.87	0.73
MOTOR HOMES (MH)	4.33	3.25	2.99	2.47	2.26	2.06	1.87	1.69	1.51	1.34	1.20	0.91	0.79	0.59	0.39
On-Road Subtotal	**993.06**	**833.99**	**768.06**	**656.32**	**616.65**	**578.75**	**545.70**	**514.88**	**486.84**	**460.97**	**438.29**	**399.04**	**381.46**	**353.78**	**320.83**
Other Mobile															
AIRCRAFT	32.78	34.93	35.81	38.67	39.41	40.29	41.29	42.07	42.84	43.60	44.40	45.89	46.62	48.15	50.03
TRAINS	11.90	12.15	12.00	11.80	11.73	11.73	11.84	11.90	11.96	12.02	12.10	12.27	12.36	12.57	12.91
SHIPS AND COMMERCIAL BOATS	15.05	15.47	15.52	15.65	15.72	15.81	15.85	15.96	16.09	16.26	16.41	17.29	17.81	18.95	21.41
RECREATIONAL BOATS	231.28	225.30	220.30	208.64	202.02	196.37	191.67	187.81	184.61	181.93	179.65	176.17	174.87	172.89	174.06
OFF-ROAD RECREATIONAL VEHICLES	54.06	66.57	68.42	71.31	72.91	74.78	76.83	79.08	81.46	84.05	86.79	92.75	96.00	102.89	114.02
OFF-ROAD EQUIPMENT	250.62	248.70	233.92	211.77	201.80	191.49	182.68	174.47	166.97	159.99	153.92	143.98	140.50	135.50	133.64
FARM EQUIPMENT	33.19	30.34	28.85	25.71	24.44	23.39	22.01	20.19	18.38	16.83	15.43	12.91	11.73	9.91	8.23
FUEL STORAGE AND HANDLING	54.28	51.37	48.97	35.81	32.99	30.79	28.82	27.06	25.53	24.20	23.03	21.17	20.42	19.10	17.53
Other Mobile Subtotal	**683.15**	**684.85**	**663.80**	**619.36**	**601.03**	**584.64**	**570.99**	**558.53**	**547.84**	**538.89**	**531.72**	**522.42**	**520.31**	**519.96**	**531.82**
Grand Total	**2853.03**	**2625.85**	**2524.53**	**2363.20**	**2312.99**	**2266.90**	**2230.09**	**2196.50**	**2170.42**	**2148.58**	**2128.87**	**2100.89**	**2091.71**	**2084.81**	**2096.91**

ROG - STWD															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-15.82	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizes Corr.	-2.40	-1.54	-1.40	-1.11	-0.97	-0.82	-0.81	-0.80	-0.78	-0.77	-0.76	-0.71	-0.68	-0.63	-0.52
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.06	-0.23	-0.32	-0.40	-0.38	-0.35	-0.33	-0.30	-0.28	-0.21	-0.18	-0.11	-0.01
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.32	-0.64	-0.96	-1.28	-1.60	-2.24	-2.56	-3.20	-4.16
Moyer	0.00	0.00	-0.10	-0.29	-0.44	-0.57	-0.70	-0.70	-0.70	-0.70	-0.63	-0.50	-0.30	0.00	0.00
Consumer Products	0.00	0.00	0.00	-10.00	-10.10	-10.20	-10.30	-10.41	-10.52	-10.62	-10.73	-10.94	-11.05	-11.26	-11.56
Off-Road	0.00	0.00	0.00	0.00	0.00	-0.94	-1.14	-1.33	-1.50	-1.66	-1.80	-2.06	-2.17	-2.40	-2.06
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SJV Adjustments	56.18	56.90	58.87	62.80	63.53	64.23	64.90	65.40	68.72	72.10	72.77	74.20	75.22	77.30	80.40
Summary	**53.78**	**39.54**	**57.32**	**51.16**	**51.70**	**51.30**	**51.24**	**51.17**	**53.93**	**56.77**	**56.97**	**57.54**	**58.29**	**59.71**	**62.10**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

PM2.5 - STWD - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	16.74	17.84	23.10	20.30	24.94	33.95	34.05	34.16	34.26	34.37	34.48	34.77	34.94	35.24	35.64
COGENERATION	3.44	3.58	3.67	3.71	3.78	3.82	3.81	3.83	3.85	3.87	3.89	3.96	3.99	4.05	4.12
OIL AND GAS PRODUCTION (COMBUSTION)	1.27	1.36	1.40	1.36	1.36	1.35	1.35	1.35	1.36	1.36	1.36	1.38	1.39	1.40	1.44
PETROLEUM REFINING (COMBUSTION)	3.28	2.95	2.96	2.98	3.00	3.01	3.02	3.04	3.05	3.06	3.08	3.10	3.12	3.15	3.19
MANUFACTURING AND INDUSTRIAL	5.61	5.81	5.89	5.95	6.03	6.13	6.21	6.30	6.40	6.49	6.58	6.72	6.78	6.91	7.13
FOOD AND AGRICULTURAL PROCESSING	3.42	3.31	3.19	3.02	2.95	2.87	2.80	2.72	2.65	2.58	2.50	2.36	2.29	2.16	1.95
SERVICE AND COMMERCIAL	4.39	4.44	4.52	4.57	4.61	4.65	4.68	4.71	4.73	4.77	4.78	4.82	4.84	4.89	4.98
OTHER (FUEL COMBUSTION)	5.83	5.42	5.30	5.45	5.53	5.60	5.67	5.75	5.83	5.90	5.97	6.11	6.18	6.32	6.61
SEWAGE TREATMENT	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LANDFILLS	0.51	0.52	0.53	0.55	0.56	0.56	0.57	0.58	0.59	0.59	0.60	0.61	0.62	0.63	0.65
INCINERATORS	0.12	0.13	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.18
SOIL REMEDIATION	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.13
OTHER (WASTE DISPOSAL)	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.78	0.88	0.92	1.00	1.03	1.07	1.10	1.12	1.14	1.17	1.19	1.23	1.25	1.29	1.36
PRINTING	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
OTHER (CLEANING AND SURFACE COATINGS)	0.11	0.11	0.11	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08
OIL AND GAS PRODUCTION	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04
PETROLEUM REFINING	1.73	1.71	1.66	1.63	1.59	1.60	1.62	1.56	1.57	1.58	1.60	1.63	1.64	1.67	1.72
PETROLEUM MARKETING	0.14	0.14	0.15	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.17	0.17
OTHER (PETROLEUM PRODUCTION AND MARKE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	3.86	4.22	4.37	4.58	4.68	4.79	4.88	4.97	5.08	5.17	5.28	5.44	5.52	5.70	5.95
FOOD AND AGRICULTURE	7.45	7.42	7.41	7.41	7.38	7.38	7.40	7.41	7.42	7.43	7.43	7.47	7.48	7.52	7.55
MINERAL PROCESSES	23.86	24.91	24.43	25.23	25.63	26.06	26.44	26.79	27.15	27.56	28.02	28.82	29.22	29.88	31.07
METAL PROCESSES	0.76	0.79	0.81	0.85	0.87	0.90	0.91	0.92	0.93	0.96	0.97	1.00	1.01	1.03	1.07
WOOD AND PAPER	8.05	8.15	8.19	8.61	8.81	9.03	9.20	9.38	9.56	9.76	9.90	10.40	10.66	11.17	11.71
GLASS AND RELATED PRODUCTS	1.55	1.60	1.60	1.67	1.70	1.74	1.78	1.81	1.85	1.88	1.93	1.99	2.02	2.09	2.19
ELECTRONICS	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (INDUSTRIAL PROCESSES)	4.89	5.01	5.04	5.19	5.27	5.35	5.42	5.50	5.57	5.64	5.72	5.86	5.93	6.07	6.29
Stationary Subtotal	**98.08**	**100.58**	**105.68**	**104.71**	**110.38**	**120.53**	**121.59**	**122.59**	**123.68**	**124.83**	**125.99**	**128.40**	**129.63**	**131.93**	**135.42**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PRO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
RESIDENTIAL FUEL COMBUSTION	23.39	23.45	23.55	23.62	23.66	23.68	23.76	23.85	23.94	24.03	24.14	24.40	24.54	24.86	25.20
FARMING OPERATIONS	58.56	55.84	54.71	55.28	55.56	53.79	54.13	54.47	54.81	55.15	55.48	56.18	56.53	57.23	58.35
CONSTRUCTION AND DEMOLITION	40.19	41.40	42.25	43.12	43.92	44.54	44.62	45.20	45.77	46.34	46.92	47.85	48.31	49.25	50.45
PAVED ROAD DUST	64.39	66.65	67.18	68.60	69.74	70.88	71.94	73.01	74.10	75.18	76.26	78.32	79.35	81.45	84.65
UNPAVED ROAD DUST	143.52	144.18	144.31	144.93	145.44	145.77	146.49	147.21	147.93	148.65	149.37	151.34	152.32	154.29	157.24
FUGITIVE WINDBLOWN DUST	125.28	118.47	117.91	101.46	101.37	100.61	100.53	100.45	100.38	100.30	100.23	100.10	100.04	99.92	99.84
FIRES	1.06	1.09	1.10	1.12	1.12	1.13	1.14	1.15	1.15	1.16	1.17	1.19	1.19	1.21	1.24
MANAGED BURNING AND DISPOSAL	88.50	92.05	93.23	95.60	96.79	97.98	97.91	97.84	97.77	97.70	97.63	97.48	97.40	97.25	97.06
COOKING	22.21	23.01	23.35	24.09	24.45	24.83	25.18	25.52	25.87	26.22	26.57	27.14	27.43	28.00	28.91
OTHER (MISCELLANEOUS PROCESSES)	0.59	0.62	0.63	0.65	0.66	0.67	0.69	0.70	0.71	0.72	0.73	0.75	0.76	0.78	0.82
Area-Wide Subtotal	**567.72**	**566.80**	**568.25**	**558.51**	**562.78**	**563.92**	**566.43**	**569.43**	**572.47**	**575.49**	**578.53**	**584.81**	**587.93**	**594.29**	**603.81**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	9.25	9.18	9.12	9.26	9.44	9.65	9.85	9.99	10.13	10.29	10.44	10.77	10.90	11.18	11.58
LIGHT DUTY TRUCKS - 1 (LDT1)	2.58	2.45	2.44	2.48	2.52	2.57	2.62	2.65	2.68	2.71	2.74	2.81	2.83	2.88	3.00
LIGHT DUTY TRUCKS - 2 (LDT2)	5.64	6.88	6.91	7.19	7.43	7.69	7.99	8.23	8.46	8.70	8.90	9.33	9.50	9.80	10.33
MEDIUM DUTY TRUCKS (MDV)	2.14	2.98	3.00	3.15	3.27	3.41	3.56	3.69	3.81	3.94	4.05	4.26	4.34	4.49	4.75
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.28	0.33	0.31	0.30	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.38	0.39	0.41	0.44
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.07	0.06	0.06	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.05	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.04	0.38	0.34	0.27	0.27	0.25	0.24	0.24	0.23	0.23	0.22	0.21	0.21	0.20	0.19
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.23	0.28	0.27	0.23	0.23	0.22	0.21	0.20	0.20	0.19	0.19	0.17	0.17	0.16	0.15
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	3.69	4.22	3.96	3.46	3.41	3.30	3.19	3.07	2.96	2.85	2.76	2.58	2.51	2.40	2.30
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	31.66	32.21	37.16	29.34	27.38	25.40	23.68	21.96	20.28	18.64	17.14	14.43	13.29	11.43	9.66
MOTORCYCLES (MCY)	0.19	0.34	0.33	0.32	0.30	0.29	0.27	0.26	0.25	0.25	0.24	0.23	0.23	0.22	0.22
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.54	0.49	0.48	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.44	0.44	0.43	0.42	0.42
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
SCHOOL BUSES (SB)	0.42	0.45	0.46	0.46	0.48	0.49	0.50	0.51	0.52	0.52	0.53	0.54	0.55	0.56	0.57
OTHER BUSES (OB)	0.16	0.19	0.19	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14
MOTOR HOMES (MH)	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
On-Road Subtotal	**57.08**	**60.67**	**65.25**	**57.37**	**55.93**	**54.48**	**53.33**	**52.03**	**50.75**	**49.56**	**48.46**	**46.59**	**45.77**	**44.59**	**44.08**
Other Mobile															
AIRCRAFT	8.30	8.51	8.64	9.33	9.44	9.58	9.75	9.83	9.91	9.99	10.07	10.24	10.32	10.49	10.61
TRAINS	4.23	4.33	4.27	3.92	3.89	3.88	3.86	3.87	3.89	3.91	3.93	3.97	4.00	4.06	4.15
SHIPS AND COMMERCIAL BOATS	20.64	23.51	24.39	23.05	23.87	24.27	25.03	25.84	26.71	27.64	28.63	31.07	32.42	35.40	40.93
RECREATIONAL BOATS	8.91	9.87	10.36	11.50	12.14	12.83	13.53	14.27	15.04	15.85	16.71	18.50	19.43	21.37	24.87
OFF-ROAD RECREATIONAL VEHICLES	0.49	0.47	0.48	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	0.70	0.72	0.78	0.86
OFF-ROAD EQUIPMENT	32.93	30.93	30.08	26.67	25.38	24.10	22.80	21.25	19.59	18.00	16.48	13.66	12.48	10.33	8.28
FARM EQUIPMENT	9.18	8.29	7.96	6.95	6.65	6.42	6.09	5.59	5.06	4.62	4.23	3.47	3.09	2.45	1.70
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**84.68**	**85.91**	**86.17**	**81.92**	**81.88**	**81.63**	**81.62**	**81.23**	**80.80**	**80.64**	**80.69**	**81.61**	**82.46**	**84.87**	**91.40**
Grand Total	**807.56**	**813.95**	**825.36**	**802.50**	**810.97**	**820.56**	**822.97**	**825.28**	**827.71**	**830.53**	**833.68**	**841.41**	**845.80**	**855.67**	**874.70**

PM2.5 - STWD															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-9.13	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.06	-0.24	-0.33	-0.41	-0.38	-0.34	-0.31	-0.28	-0.24	-0.18	-0.15	-0.09	-0.01
Idling	0.00	-0.11	-0.16	-0.16	-0.15	-0.15	-0.12	-0.10	-0.08	-0.06	-0.03	-0.01	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.06	-0.13	-0.19	-0.25	-0.31	-0.44	-0.50	-0.63	-0.81
Moyer	0.00	-0.36	-0.30	-0.30	-0.30	-0.30	-0.32	-0.35	-0.35	-0.34	-0.30	-0.21	-0.16	0.00	0.00
Off-road	0.00	-0.05	-0.04	-0.62	-0.82	-1.03	-1.10	-1.18	-1.23	-1.26	-1.29	-1.41	-1.38	-1.45	-1.25
Ships	0.00	0.00	0.00	-3.21	-3.41	-4.08	-4.32	-4.58	-4.89	-5.21	-5.57	-6.39	-6.86	-7.94	-10.07
Summary	**0.00**	**-9.65**	**-0.56**	**-4.52**	**-5.01**	**-5.97**	**-6.31**	**-6.68**	**-7.03**	**-7.40**	**-7.76**	**-8.63**	**-9.05**	**-10.11**	**-12.15**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

SOX - STWD - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	3.63	3.59	3.62	3.72	3.68	3.69	3.70	3.72	3.74	3.75	3.77	3.91	3.99	4.13	4.24
COGENERATION	1.58	1.65	1.67	1.67	1.67	1.68	1.69	1.69	1.69	1.69	1.69	1.70	1.71	1.71	1.71
OIL AND GAS PRODUCTION (COMBUSTION)	2.26	2.51	2.60	2.51	2.50	2.49	2.50	2.50	2.51	2.52	2.52	2.57	2.59	2.63	2.72
PETROLEUM REFINING (COMBUSTION)	10.86	8.78	8.82	8.93	8.99	9.03	9.12	9.18	9.24	9.30	9.36	9.49	9.55	9.68	9.88
MANUFACTURING AND INDUSTRIAL	13.19	14.49	14.97	15.29	15.45	15.74	16.01	16.24	16.47	16.70	16.92	17.19	17.32	17.59	18.02
FOOD AND AGRICULTURAL PROCESSING	2.90	2.91	2.90	2.88	2.87	2.87	2.86	2.86	2.85	2.85	2.84	2.83	2.82	2.81	2.81
SERVICE AND COMMERCIAL	2.70	2.67	2.68	2.69	2.70	2.71	2.72	2.73	2.74	2.76	2.76	2.76	2.76	2.77	2.78
OTHER (FUEL COMBUSTION)	0.64	0.65	0.71	0.71	0.71	0.72	0.74	0.74	0.74	0.74	0.75	0.75	0.76	0.76	0.78
SEWAGE TREATMENT	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11
LANDFILLS	0.49	0.50	0.51	0.53	0.53	0.54	0.54	0.55	0.55	0.56	0.57	0.58	0.59	0.60	0.62
INCINERATORS	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OIL AND GAS PRODUCTION	0.48	0.51	0.52	0.52	0.52	0.52	0.52	0.52	0.51	0.51	0.51	0.51	0.51	0.51	0.51
PETROLEUM REFINING	58.77	60.24	60.92	62.38	62.90	63.82	64.70	60.41	60.95	61.50	62.48	64.04	64.61	66.21	68.44
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	3.93	4.42	4.36	4.53	4.59	4.66	4.73	4.78	4.84	4.90	4.95	5.06	5.12	5.24	5.42
FOOD AND AGRICULTURE	0.99	1.04	1.05	1.05	1.06	1.06	1.06	1.07	1.07	1.07	1.08	1.08	1.08	1.09	1.09
MINERAL PROCESSES	19.31	19.88	20.26	20.92	21.26	21.62	22.00	22.35	22.71	23.09	23.46	24.15	24.49	25.16	26.22
METAL PROCESSES	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
WOOD AND PAPER	0.13	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.18	0.18
GLASS AND RELATED PRODUCTS	3.84	3.93	3.94	4.13	4.21	4.32	4.41	4.49	4.60	4.68	4.79	4.96	5.04	5.21	5.48
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	1.07	1.04	1.05	1.07	1.08	1.08	1.06	1.07	1.08	1.09	1.10	1.12	1.13	1.15	1.19
Stationary Subtotal	**127.02**	**129.19**	**130.96**	**133.92**	**135.15**	**136.97**	**138.79**	**135.33**	**136.75**	**138.16**	**140.02**	**143.18**	**144.56**	**147.75**	**152.40**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	1.20	1.16	1.16	1.15	1.15	1.15	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.15	1.14
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	2.55	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.53	2.53	2.53	2.53
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**3.74**	**3.70**	**3.70**	**3.69**	**3.69**	**3.69**	**3.68**	**3.68**	**3.68**	**3.68**	**3.68**	**3.67**	**3.67**	**3.68**	**3.67**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	3.04	2.16	2.11	2.05	2.08	2.10	2.13	2.16	2.19	2.21	2.24	2.29	2.31	2.36	2.44
LIGHT DUTY TRUCKS - 1 (LDT1)	1.08	0.75	0.72	0.55	0.56	0.57	0.58	0.59	0.60	0.61	0.62	0.64	0.65	0.67	0.71
LIGHT DUTY TRUCKS - 2 (LDT2)	1.38	1.21	1.18	1.15	1.16	1.17	1.18	1.20	1.22	1.23	1.25	1.28	1.30	1.33	1.40
MEDIUM DUTY TRUCKS (MDV)	0.79	0.77	0.75	0.72	0.72	0.72	0.73	0.74	0.75	0.75	0.76	0.78	0.79	0.82	0.86
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.14	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.17
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.32	0.28	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.13	0.19	0.17	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.45	1.83	1.74	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.22	0.22	0.23	0.24
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	4.88	5.80	7.00	0.72	0.73	0.75	0.77	0.79	0.82	0.85	0.89	0.94	0.96	1.01	1.07
MOTORCYCLES (MCY)	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.34	0.34	0.34	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.12	0.13	0.13	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER BUSES (OB)	0.06	0.07	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
MOTOR HOMES (MH)	0.05	0.06	0.06	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
On-Road Subtotal	**13.60**	**13.84**	**14.79**	**5.72**	**5.78**	**5.86**	**5.95**	**6.04**	**6.14**	**6.24**	**6.35**	**6.54**	**6.64**	**6.82**	**7.12**
Other Mobile															
AIRCRAFT	3.39	3.77	3.89	4.18	4.30	4.43	4.54	4.65	4.76	4.87	4.97	5.17	5.27	5.51	5.81
TRAINS	7.02	7.53	7.72	0.80	0.82	0.85	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.14
SHIPS AND COMMERCIAL BOATS	122.85	146.12	153.61	142.91	149.96	150.69	157.60	164.86	172.59	180.72	189.29	207.98	218.21	240.57	280.15
RECREATIONAL BOATS	0.12	0.10	0.10	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.12	0.13	0.13	0.14	0.16
OFF-ROAD RECREATIONAL VEHICLES	0.73	0.61	0.65	0.70	0.73	0.76	0.78	0.82	0.85	0.88	0.91	0.98	1.01	1.09	1.21
OFF-ROAD EQUIPMENT	3.44	3.60	3.66	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.47	0.48	0.49	0.51	0.54
FARM EQUIPMENT	1.16	1.15	1.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**138.72**	**162.88**	**170.78**	**149.21**	**156.45**	**157.38**	**163.70**	**171.10**	**178.99**	**187.27**	**195.99**	**214.98**	**225.36**	**248.06**	**288.12**
Grand Total	**283.08**	**309.61**	**320.23**	**292.54**	**301.06**	**303.89**	**312.12**	**316.15**	**325.55**	**335.35**	**346.04**	**368.38**	**380.23**	**406.31**	**451.32**

SOX - STWD															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.64	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	-26.77	-28.43	-36.83	-39.05	-41.41	-44.17	-47.15	-50.38	-57.77	-62.01	-71.87	-91.20
Summary	**0.00**	**-1.64**	**0.00**	**-26.77**	**-28.43**	**-36.83**	**-39.05**	**-41.41**	**-44.17**	**-47.15**	**-50.38**	**-57.77**	**-62.01**	**-71.87**	**-91.20**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Ventura County

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NOX - Ventura - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	1.36	1.53	1.56	1.62	1.65	1.67	1.68	1.69	1.70	1.71	1.72	1.73	1.74	1.76	1.78
COGENERATION	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OIL AND GAS PRODUCTION (COMBUSTION)	0.38	0.38	0.37	0.36	0.35	0.35	0.35	0.34	0.34	0.34	0.33	0.33	0.33	0.32	0.32
PETROLEUM REFINING (COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
MANUFACTURING AND INDUSTRIAL	0.85	0.85	0.87	0.89	0.91	0.92	0.93	0.95	0.96	0.97	0.98	1.00	1.01	1.03	1.06
FOOD AND AGRICULTURAL PROCESSING	2.54	2.49	2.44	2.34	2.28	2.23	2.17	2.11	2.04	1.97	1.89	1.74	1.66	1.49	1.21
SERVICE AND COMMERCIAL	0.60	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.60	0.61	0.62	0.63	0.63	0.65	0.66
OTHER (FUEL COMBUSTION)	0.52	0.38	0.37	0.34	0.32	0.31	0.30	0.29	0.27	0.26	0.25	0.23	0.22	0.21	0.21
SEWAGE TREATMENT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LANDFILLS	0.08	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.14	0.15
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
METAL PROCESSES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stationary Subtotal	**6.47**	**6.45**	**6.42**	**6.37**	**6.35**	**6.33**	**6.28**	**6.23**	**6.18**	**6.12**	**6.07**	**5.94**	**5.88**	**5.74**	**5.52**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	1.12	1.14	1.15	1.16	1.16	1.17	1.17	1.18	1.18	1.19	1.21	1.23	1.25	1.27	1.31
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**1.27**	**1.30**	**1.30**	**1.32**	**1.32**	**1.33**	**1.34**	**1.35**	**1.35**	**1.36**	**0.00**	**1.41**	**1.42**	**1.45**	**1.50**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	6.25	4.28	3.87	3.24	2.95	2.65	2.38	2.14	1.93	1.74	1.57	1.30	1.19	1.02	0.81
LIGHT DUTY TRUCKS - 1 (LDT1)	1.62	1.22	1.10	0.92	0.84	0.76	0.70	0.64	0.59	0.53	0.49	0.40	0.37	0.31	0.24
LIGHT DUTY TRUCKS - 2 (LDT2)	5.02	3.73	3.38	2.90	2.73	2.56	2.40	2.24	2.09	1.94	1.81	1.56	1.46	1.27	1.05
MEDIUM DUTY TRUCKS (MDV)	2.88	2.33	2.14	1.86	1.76	1.67	1.58	1.49	1.40	1.31	1.22	1.07	0.99	0.86	0.69
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.94	1.67	1.30	0.98	0.93	0.89	0.87	0.85	0.84	0.85	0.85	0.81	0.80	0.77	0.75
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.26	0.25	0.21	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.16	0.16	0.15	0.15
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.43	0.48	0.39	0.29	0.28	0.27	0.25	0.23	0.22	0.21	0.20	0.17	0.15	0.13	0.11
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.46	0.47	0.38	0.28	0.26	0.23	0.21	0.19	0.17	0.16	0.14	0.11	0.10	0.08	0.06
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.04	1.34	1.08	0.77	0.73	0.66	0.61	0.58	0.55	0.53	0.51	0.45	0.43	0.39	0.33
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.73	0.97	0.80	0.60	0.57	0.53	0.50	0.47	0.44	0.43	0.41	0.35	0.33	0.29	0.24
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	3.07	3.27	2.69	2.08	1.99	1.84	1.70	1.56	1.44	1.34	1.25	1.02	0.93	0.78	0.61
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	4.70	5.09	5.41	4.05	3.84	3.53	3.24	2.96	2.71	2.53	2.37	2.01	1.86	1.62	1.45
MOTORCYCLES (MCY)	0.13	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.23
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SCHOOL BUSES (SB)	0.17	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16
OTHER BUSES (OB)	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03
MOTOR HOMES (MH)	0.43	0.38	0.37	0.33	0.31	0.29	0.27	0.26	0.24	0.22	0.21	0.18	0.17	0.15	0.12
On-Road Subtotal	**28.31**	**26.02**	**23.64**	**18.99**	**17.90**	**16.60**	**15.40**	**14.31**	**13.30**	**12.48**	**13.11**	**10.11**	**9.45**	**8.34**	**7.11**
Other Mobile															
AIRCRAFT	0.38	0.46	0.48	0.51	0.52	0.52	0.54	0.55	0.55	0.55	0.55	0.56	0.56	0.57	0.57
TRAINS	2.46	1.98	1.84	1.72	1.70	1.27	1.30	1.32	1.33	1.35	1.36	1.40	1.41	1.45	1.52
SHIPS AND COMMERCIAL BOATS	14.27	15.75	16.27	17.28	17.80	18.35	18.94	19.56	20.21	20.91	21.65	23.30	24.18	26.16	29.83
RECREATIONAL BOATS	0.89	1.13	1.20	1.26	1.25	1.25	1.24	1.24	1.25	1.25	1.26	1.27	1.28	1.29	1.30
OFF-ROAD RECREATIONAL VEHICLES	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.09	0.09	0.09	0.10
OFF-ROAD EQUIPMENT	15.61	14.45	14.02	12.73	12.11	11.46	10.88	10.30	9.70	9.14	8.54	7.53	7.07	6.28	5.44
FARM EQUIPMENT	3.81	3.42	3.29	2.97	2.83	2.72	2.58	2.40	2.22	2.07	1.91	1.62	1.48	1.24	0.95
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**37.45**	**37.25**	**37.16**	**36.53**	**36.28**	**35.64**	**35.55**	**35.44**	**35.34**	**35.34**	**35.36**	**35.76**	**36.08**	**37.10**	**39.72**
Grand Total	**73.50**	**71.01**	**68.53**	**63.22**	**61.85**	**59.91**	**58.57**	**57.33**	**56.17**	**55.31**	**54.54**	**53.23**	**52.83**	**52.62**	**53.85**

NOX - Ventura															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.51	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.01	-0.22	-0.16	-0.15	-0.13	-0.12	-0.10	-0.09	-0.08	-0.07	-0.06	-0.04	-0.03	-0.02	-0.01
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	-0.04	-0.10	-0.19	-0.20	-0.21	-0.21	-0.22	-0.22	-0.24	-0.25	-0.27	-0.27	-0.29	-0.33
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.15	-0.20	-0.17	-0.11	-0.14	-0.17	-0.19	-0.19	-0.19	-0.19	-0.17	-0.13	-0.09	0.00	0.00
Off-road	0.00	-0.02	-0.03	-0.12	-0.20	-0.38	-0.38	-0.39	-0.40	-0.37	-0.34	-0.29	-0.28	-0.24	-0.19
Ships	0.00	0.00	0.00	-0.08	-0.09	-0.09	-0.10	-0.10	-0.11	-0.12	-0.13	-0.14	-0.15	-0.18	-0.22
Summary	**-0.16**	**-2.00**	**-0.47**	**-0.66**	**-0.76**	**-0.96**	**-0.99**	**-1.00**	**-1.01**	**-0.99**	**-0.96**	**-0.88**	**-0.84**	**-0.74**	**-0.76**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Ventura - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.24	0.27	0.28	0.29	0.29	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31
COGENERATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION (COMBUSTION)	0.15	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13
PETROLEUM REFINING (COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
FOOD AND AGRICULTURAL PROCESSING	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
SERVICE AND COMMERCIAL	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
OTHER (FUEL COMBUSTION)	0.07	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02
SEWAGE TREATMENT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LANDFILLS	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.15	0.16	0.17
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
DEGREASING	3.17	2.17	2.20	2.27	2.31	2.34	2.38	2.41	2.44	2.47	2.50	2.55	2.57	2.62	2.69
COATINGS AND RELATED PROCESS SOLVENTS	2.09	2.10	2.13	2.19	2.22	2.25	2.28	2.31	2.34	2.37	2.40	2.44	2.47	2.51	2.58
PRINTING	0.27	0.27	0.27	0.28	0.28	0.29	0.29	0.29	0.29	0.30	0.30	0.31	0.31	0.32	0.32
ADHESIVES AND SEALANTS	0.40	0.38	0.38	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.43	0.44	0.44	0.45	0.46
OTHER (CLEANING AND SURFACE COATINGS)	0.38	0.38	0.38	0.39	0.40	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.45	0.46	0.47
OIL AND GAS PRODUCTION	2.07	2.06	2.04	2.01	2.00	1.98	1.97	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.86
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	1.07	1.04	1.04	1.03	1.02	1.04	1.04	1.05	1.06	1.06	1.07	1.09	1.09	1.11	1.13
CHEMICAL	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13
FOOD AND AGRICULTURE	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
MINERAL PROCESSES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13
ELECTRONICS	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (INDUSTRIAL PROCESSES)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09
Stationary Subtotal	10.71	9.68	9.74	9.89	9.97	10.06	10.14	10.22	10.30	10.38	10.45	10.58	10.64	10.77	10.96
Area-Wide															
CONSUMER PRODUCTS	5.77	5.24	5.24	5.06	5.11	5.15	5.21	5.26	5.31	5.36	5.41	5.50	5.55	5.65	5.78
ARCHITECTURAL COATINGS AND RELATED PROCES	3.21	2.78	2.81	2.87	2.91	2.94	2.97	3.01	3.04	3.08	3.11	3.18	3.21	3.28	3.38
PESTICIDES/FERTILIZERS	3.99	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82
ASPHALT PAVING / ROOFING	0.56	0.58	0.59	0.60	0.61	0.62	0.62	0.63	0.64	0.64	0.65	0.67	0.67	0.69	0.71
RESIDENTIAL FUEL COMBUSTION	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.25
FARMING OPERATIONS	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANAGED BURNING AND DISPOSAL	0.19	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.23	0.24
COOKING	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
Area-Wide Subtotal	14.12	14.03	14.06	13.97	14.06	14.15	14.25	14.34	14.44	14.54	14.63	14.82	14.92	15.11	15.38

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	8.88	6.59	5.98	5.01	4.60	4.18	3.81	3.47	3.20	2.95	2.74	2.39	2.24	1.99	1.70
LIGHT DUTY TRUCKS - 1 (LDT1)	1.80	1.46	1.33	1.12	1.03	0.94	0.88	0.83	0.78	0.73	0.69	0.60	0.57	0.53	0.47
LIGHT DUTY TRUCKS - 2 (LDT2)	3.53	2.93	2.74	2.50	2.44	2.38	2.31	2.24	2.18	2.11	2.05	1.94	1.88	1.79	1.66
MEDIUM DUTY TRUCKS (MDV)	1.82	1.53	1.43	1.31	1.28	1.26	1.24	1.21	1.18	1.15	1.13	1.07	1.04	0.98	0.88
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.22	1.05	0.78	0.52	0.48	0.44	0.43	0.41	0.40	0.39	0.39	0.37	0.36	0.35	0.33
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.19	0.18	0.14	0.10	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.43	0.41	0.31	0.22	0.21	0.19	0.17	0.16	0.15	0.14	0.13	0.11	0.10	0.09	0.07
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.18	0.18	0.14	0.10	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.04	0.04	0.03	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.04	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.36	0.40	0.42	0.32	0.30	0.28	0.26	0.25	0.23	0.22	0.21	0.18	0.17	0.15	0.15
MOTORCYCLES (MCY)	0.87	1.20	1.15	1.08	1.05	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.95	0.95	0.91
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SCHOOL BUSES (SB)	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
MOTOR HOMES (MH)	0.11	0.08	0.08	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.01	0.01
On-Road Subtotal	19.51	16.17	14.63	12.44	11.73	11.02	10.40	9.84	9.36	8.91	8.53	7.83	7.52	7.01	6.33
Other Mobile															
AIRCRAFT	0.58	0.68	0.72	0.76	0.77	0.77	0.80	0.80	0.81	0.81	0.81	0.82	0.82	0.83	0.84
TRAINS	0.13	0.13	0.12	0.12	0.12	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
SHIPS AND COMMERCIAL BOATS	0.79	0.85	0.87	0.90	0.91	0.92	0.94	0.95	0.97	0.98	1.00	1.05	1.08	1.14	1.26
RECREATIONAL BOATS	3.85	3.87	3.81	3.65	3.55	3.48	3.42	3.37	3.33	3.30	3.28	3.25	3.24	3.24	3.30
OFF-ROAD RECREATIONAL VEHICLES	1.99	2.42	2.52	2.65	2.72	2.80	2.89	2.98	3.08	3.18	3.29	3.52	3.65	3.91	4.34
OFF-ROAD EQUIPMENT	5.89	5.71	5.39	4.90	4.67	4.45	4.24	4.05	3.88	3.72	3.57	3.33	3.24	3.10	3.05
FARM EQUIPMENT	0.77	0.69	0.66	0.59	0.56	0.54	0.50	0.46	0.42	0.39	0.36	0.30	0.27	0.23	0.19
FUEL STORAGE AND HANDLING	1.21	1.13	1.08	0.79	0.72	0.67	0.62	0.58	0.55	0.52	0.49	0.45	0.43	0.40	0.37
Other Mobile Subtotal	15.21	15.49	15.16	14.34	14.02	13.74	13.52	13.31	13.14	13.00	12.91	12.82	12.84	12.97	13.46
Grand Total	59.56	55.35	53.59	50.64	49.78	48.96	48.30	47.71	47.23	46.83	46.53	46.05	45.92	45.86	46.14

ROG - Ventura															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.11	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-3.02	-1.14	-0.80	-0.14	0.20	0.53	0.53	0.54	0.54	0.55	0.56	0.57	0.57	0.58	0.60
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.03	-0.04	-0.06	-0.06	-0.08	-0.10
Moyer	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.22	-0.22	-0.22	-0.23	-0.23	-0.23	-0.23	-0.24	-0.24	-0.24	-0.25	-0.25
Off-road	0.00	0.00	0.00	0.00	0.00	-0.02	-0.02	-0.03	-0.03	-0.03	-0.04	-0.04	-0.05	-0.05	-0.04
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-3.02**	**-1.26**	**-0.80**	**-0.36**	**-0.03**	**0.27**	**0.26**	**0.24**	**0.25**	**0.24**	**0.23**	**0.22**	**0.21**	**0.21**	**0.20**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Western Mojave Desert

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NOX - W MOJAVE - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	4.65	6.40	6.52	6.75	6.87	7.00	7.00	7.00	7.00	7.00	7.00	7.79	8.19	8.98	10.16
COGENERATION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.09
MANUFACTURING AND INDUSTRIAL	2.49	2.65	2.69	2.76	2.79	2.83	2.88	2.94	2.99	3.03	3.08	3.16	3.20	3.28	3.39
SERVICE AND COMMERCIAL	2.56	2.59	2.60	2.59	2.59	2.59	2.58	2.58	2.57	2.57	2.57	2.54	2.52	2.50	2.46
OTHER (FUEL COMBUSTION)	0.22	0.23	0.23	0.24	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	29.95	31.35	31.69	32.74	33.26	33.78	34.35	34.91	35.55	36.11	36.74	37.78	38.31	39.36	40.93
METAL PROCESSES	0.50	0.48	0.47	0.49	0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.58	0.59	0.61	0.64
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	1.58	1.65	1.65	1.72	1.79	1.83	1.90	1.94	2.01	2.08	2.12	2.19	2.26	2.33	2.48
OTHER (INDUSTRIAL PROCESSES)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.08	0.08
Stationary Subtotal	**42.18**	**45.58**	**46.09**	**47.53**	**48.29**	**49.03**	**49.72**	**50.38**	**51.15**	**51.84**	**52.57**	**54.55**	**55.59**	**57.56**	**60.58**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.45	0.46	0.47	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.51	0.52	0.52	0.53	0.54
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.17	0.16	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.13	0.13	0.12	0.12	0.11
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.62**	**0.63**	**0.63**	**0.63**	**0.63**	**0.64**	**0.64**	**0.64**	**0.64**	**0.64**	**0.64**	**0.65**	**0.65**	**0.65**	**0.65**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	6.40	4.95	4.45	3.73	3.45	3.17	2.87	2.61	2.37	2.15	1.97	1.66	1.52	1.31	1.06
LIGHT DUTY TRUCKS - 1 (LDT1)	4.14	3.00	2.70	2.29	2.15	2.00	1.89	1.77	1.65	1.51	1.38	1.15	1.05	0.89	0.68
LIGHT DUTY TRUCKS - 2 (LDT2)	4.28	4.16	3.70	3.07	2.89	2.71	2.54	2.38	2.22	2.07	1.93	1.68	1.57	1.39	1.17
MEDIUM DUTY TRUCKS (MDV)	1.63	2.13	1.90	1.55	1.45	1.36	1.30	1.23	1.17	1.11	1.04	0.93	0.87	0.77	0.65
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.39	0.56	0.45	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.40	0.39
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.24	0.20	0.17	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.23	0.22	0.18	0.14	0.13	0.13	0.12	0.11	0.10	0.09	0.09	0.08	0.07	0.06	0.05
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.60	0.53	0.44	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.40
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	1.18	0.88	0.58	0.55	0.50	0.45	0.41	0.39	0.36	0.35	0.31	0.30	0.27	0.23
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.50	0.88	0.72	0.55	0.54	0.51	0.48	0.45	0.43	0.40	0.38	0.34	0.31	0.28	0.23
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.73	2.72	2.32	1.90	1.88	1.79	1.67	1.55	1.44	1.33	1.24	1.06	0.98	0.84	0.66
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	61.79	66.14	70.14	53.31	51.23	48.05	44.76	41.32	37.88	34.40	31.13	25.75	23.57	20.03	17.08
MOTORCYCLES (MCY)	0.19	0.49	0.48	0.47	0.46	0.46	0.47	0.48	0.49	0.49	0.50	0.52	0.53	0.55	0.54
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.07	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
HEAVY DUTY GAS URBAN BUSES (UB)	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
SCHOOL BUSES (SB)	0.41	0.41	0.42	0.44	0.45	0.46	0.47	0.47	0.48	0.49	0.49	0.49	0.48	0.48	0.46
OTHER BUSES (OB)	0.12	0.14	0.14	0.14	0.14	0.13	0.13	0.12	0.12	0.11	0.10	0.09	0.08	0.07	0.06
MOTOR HOMES (MH)	0.29	0.30	0.29	0.28	0.28	0.27	0.26	0.25	0.23	0.22	0.21	0.18	0.17	0.14	0.11
On-Road Subtotal	**83.07**	**88.12**	**89.49**	**69.42**	**66.55**	**62.49**	**58.36**	**54.10**	**49.90**	**45.69**	**41.76**	**35.19**	**32.48**	**28.07**	**23.98**
Other Mobile															
AIRCRAFT	0.16	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.23	0.23	0.24	0.25	0.25	0.26	0.28
TRAINS	29.20	24.46	23.05	22.25	22.26	16.72	17.07	17.42	17.79	18.16	18.56	19.42	19.88	20.85	22.48
RECREATIONAL BOATS	0.07	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
OFF-ROAD RECREATIONAL VEHICLES	0.23	0.28	0.30	0.33	0.34	0.35	0.37	0.38	0.40	0.41	0.43	0.46	0.47	0.51	0.57
OFF-ROAD EQUIPMENT	5.02	4.74	4.62	4.27	4.10	3.91	3.73	3.55	3.37	3.18	2.98	2.61	2.45	2.17	1.85
FARM EQUIPMENT	0.48	0.43	0.41	0.37	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.20	0.18	0.15	0.12
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**35.15**	**30.18**	**28.66**	**27.52**	**27.36**	**21.64**	**21.81**	**21.98**	**22.16**	**22.35**	**22.55**	**23.04**	**23.34**	**24.05**	**25.40**
Grand Total	**161.02**	**164.51**	**164.87**	**145.10**	**142.84**	**133.78**	**130.53**	**127.10**	**123.85**	**120.52**	**117.52**	**113.43**	**112.06**	**110.33**	**110.62**

NOX - W MOJAVE															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-19.57	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.13	-2.65	-1.92	-1.75	-1.60	-1.45	-1.30	-1.15	-1.01	-0.86	-0.73	-0.49	-0.39	-0.23	-0.10
Public Fleet	0.00	0.00	0.00	-0.02	-0.03	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01
Idling	0.00	-0.52	-1.32	-2.55	-2.66	-2.78	-2.89	-3.00	-3.10	-3.18	-3.26	-3.39	-3.45	-3.58	-3.88
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
Moyer	-0.10	-0.13	-0.11	-0.07	-0.08	-0.10	-0.12	-0.12	-0.12	-0.12	-0.11	-0.08	-0.06	0.00	0.00
Off-road	0.00	0.00	-0.01	-0.02	-0.04	-0.07	-0.07	-0.07	-0.08	-0.07	-0.07	-0.06	-0.05	-0.05	-0.04
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.23**	**-22.87**	**-3.36**	**-4.41**	**-4.42**	**-4.44**	**-4.42**	**-4.38**	**-4.34**	**-4.27**	**-4.19**	**-4.04**	**-3.97**	**-3.88**	**-4.04**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - Westerm Mojave - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	0.14	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.23	0.24	0.27	0.30
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.20
SERVICE AND COMMERCIAL	0.21	0.21	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.20
OTHER (FUEL COMBUSTION)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.11	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
OTHER (WASTE DISPOSAL)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	1.00	0.99	0.99	1.00	1.01	1.02	1.04	1.05	1.06	1.08	1.09	1.11	1.13	1.15	1.18
COATINGS AND RELATED PROCESS SOLVENTS	0.57	0.59	0.60	0.62	0.63	0.64	0.65	0.67	0.68	0.69	0.70	0.72	0.73	0.75	0.78
PRINTING	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ADHESIVES AND SEALANTS	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	2.34	2.48	2.53	2.59	2.63	2.67	2.72	2.76	2.81	2.85	2.90	2.99	3.04	3.13	3.28
CHEMICAL	0.21	0.23	0.24	0.25	0.26	0.26	0.27	0.27	0.28	0.29	0.29	0.30	0.31	0.32	0.33
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.95	0.99	1.01	1.05	1.07	1.09	1.11	1.13	1.15	1.17	1.19	1.23	1.25	1.29	1.35
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.21	0.22	0.23	0.22	0.23	0.24	0.25	0.25	0.25	0.25	0.26	0.28	0.29	0.31	0.35
Stationary Subtotal	**5.97**	**6.28**	**6.37**	**6.53**	**6.63**	**6.75**	**6.85**	**6.96**	**7.07**	**7.18**	**7.28**	**7.52**	**7.65**	**7.89**	**8.25**
Area-Wide															
CONSUMER PRODUCTS	2.78	2.72	2.79	2.80	2.88	2.95	3.01	3.08	3.15	3.22	3.29	3.43	3.50	3.64	3.84
ARCHITECTURAL COATINGS AND RELATED PROCI	1.53	1.32	1.34	1.37	1.38	1.40	1.41	1.43	1.44	1.46	1.47	1.51	1.53	1.57	1.62
PESTICIDES/FERTILIZERS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
ASPHALT PAVING / ROOFING	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33
RESIDENTIAL FUEL COMBUSTION	0.15	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.19
FARMING OPERATIONS	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.42	0.39	0.39	0.37	0.37	0.36	0.35	0.34	0.34	0.33	0.32	0.31	0.30	0.28	0.26
COOKING	0.61	0.65	0.66	0.68	0.69	0.71	0.72	0.73	0.74	0.75	0.76	0.79	0.80	0.82	0.86
Area-Wide Subtotal	**6.55**	**6.31**	**6.40**	**6.46**	**6.55**	**6.64**	**6.74**	**6.83**	**6.92**	**7.01**	**7.11**	**7.30**	**7.39**	**7.58**	**7.86**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	6.48	5.28	4.68	3.79	3.47	3.13	2.80	2.50	2.25	2.03	1.85	1.56	1.43	1.25	1.04
LIGHT DUTY TRUCKS - 1 (LDT1)	3.51	2.78	2.50	2.09	1.93	1.77	1.66	1.54	1.43	1.30	1.18	0.96	0.87	0.74	0.61
LIGHT DUTY TRUCKS - 2 (LDT2)	2.51	2.45	2.17	1.80	1.70	1.61	1.52	1.43	1.35	1.27	1.20	1.09	1.03	0.96	0.89
MEDIUM DUTY TRUCKS (MDV)	0.86	1.09	0.96	0.79	0.75	0.71	0.69	0.66	0.64	0.62	0.61	0.57	0.56	0.53	0.48
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.30	0.41	0.30	0.19	0.18	0.17	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.19	0.17	0.14	0.11	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.27	0.23	0.18	0.12	0.11	0.10	0.09	0.08	0.07	0.06	0.06	0.04	0.04	0.03	0.03
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.18	0.17	0.14	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.05
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.02	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	4.40	4.91	5.20	4.07	3.90	3.70	3.54	3.31	3.09	2.85	2.62	2.24	2.08	1.81	1.60
MOTORCYCLES (MCY)	0.90	2.01	1.90	1.73	1.69	1.67	1.69	1.71	1.73	1.74	1.76	1.80	1.83	1.89	1.87
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SCHOOL BUSES (SB)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER BUSES (OB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
MOTOR HOMES (MH)	0.07	0.06	0.06	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
On-Road Subtotal	**19.78**	**19.71**	**18.33**	**14.97**	**14.10**	**13.20**	**12.49**	**11.72**	**11.02**	**10.32**	**9.70**	**8.68**	**8.24**	**7.61**	**6.91**
Other Mobile															
AIRCRAFT	0.13	0.15	0.15	0.16	0.17	0.17	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.23
TRAINS	2.19	2.28	2.26	2.24	2.24	2.25	2.29	2.31	2.33	2.35	2.38	2.43	2.46	2.52	2.62
RECREATIONAL BOATS	0.46	0.43	0.42	0.39	0.38	0.36	0.35	0.34	0.33	0.33	0.32	0.31	0.30	0.30	0.30
OFF-ROAD RECREATIONAL VEHICLES	10.61	13.48	14.30	15.28	15.77	16.28	16.82	17.39	17.99	18.61	19.26	20.65	21.38	22.94	25.49
OFF-ROAD EQUIPMENT	1.90	1.92	1.82	1.67	1.61	1.54	1.48	1.42	1.37	1.32	1.28	1.21	1.18	1.15	1.15
FARM EQUIPMENT	0.10	0.09	0.09	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.02
FUEL STORAGE AND HANDLING	0.58	0.57	0.55	0.40	0.37	0.35	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.22	0.20
Other Mobile Subtotal	**15.98**	**18.92**	**19.58**	**20.23**	**20.60**	**21.03**	**21.50**	**22.01**	**22.55**	**23.12**	**23.74**	**25.07**	**25.80**	**27.37**	**30.00**
Grand Total	**48.27**	**51.21**	**50.69**	**48.18**	**47.89**	**47.62**	**47.58**	**47.51**	**47.56**	**47.64**	**47.83**	**48.57**	**49.08**	**50.44**	**53.03**

ROG - Western Mojave															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.39	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.01	-0.02	-0.03	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.03	-0.04	-0.04	-0.05	-0.07
Moyer	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.13	-0.13	-0.14	-0.14	-0.14	-0.15	-0.15	-0.15	-0.16	-0.16	-0.17	-0.18
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.01**	**-1.40**	**-0.02**	**-0.17**	**-0.19**	**-0.21**	**-0.22**	**-0.24**	**-0.23**	**-0.24**	**-0.24**	**-0.25**	**-0.25**	**-0.25**	**-0.27**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Western Nevada County

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NOX - W Nevada - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANUFACTURING AND INDUSTRIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SERVICE AND COMMERCIAL	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER (FUEL COMBUSTION)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.18	0.81	0.77	0.67	0.62	0.56	0.51	0.45	0.40	0.36	0.33	0.27	0.25	0.21	0.17
LIGHT DUTY TRUCKS - 1 (LDT1)	1.41	0.97	0.95	0.88	0.84	0.80	0.76	0.72	0.68	0.65	0.61	0.54	0.51	0.44	0.34
LIGHT DUTY TRUCKS - 2 (LDT2)	0.99	0.84	0.80	0.71	0.67	0.62	0.58	0.53	0.49	0.45	0.42	0.36	0.33	0.29	0.24
MEDIUM DUTY TRUCKS (MDV)	0.45	0.43	0.42	0.39	0.38	0.36	0.34	0.31	0.29	0.28	0.26	0.23	0.21	0.18	0.15
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.07	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.12
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.08	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.36	0.31	0.24	0.22	0.19	0.18	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.08
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.16	0.21	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.07
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.41	0.44	0.44	0.40	0.39	0.36	0.33	0.31	0.28	0.25	0.23	0.19	0.17	0.14	0.11
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	5.83	6.06	7.41	6.46	6.00	5.45	5.07	4.67	4.27	3.92	3.59	3.01	2.77	2.39	2.04
MOTORCYCLES (MCY)	0.04	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.10
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.05	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER BUSES (OB)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01
MOTOR HOMES (MH)	0.10	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.03
On-Road Subtotal	**10.98**	**10.65**	**11.83**	**10.46**	**9.80**	**9.01**	**8.39**	**7.77**	**7.15**	**6.62**	**6.12**	**5.23**	**4.86**	**4.25**	**3.61**
Other Mobile															
AIRCRAFT	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TRAINS	0.19	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.16
RECREATIONAL BOATS	0.22	0.29	0.32	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.36	0.37	0.37	0.38	0.40
OFF-ROAD RECREATIONAL VEHICLES	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
OFF-ROAD EQUIPMENT	1.33	1.26	1.23	1.13	1.07	1.02	0.97	0.93	0.88	0.83	0.78	0.68	0.64	0.58	0.51
FARM EQUIPMENT	0.37	0.33	0.32	0.29	0.28	0.27	0.25	0.24	0.22	0.20	0.19	0.16	0.15	0.12	0.10
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**2.13**	**2.07**	**2.04**	**1.93**	**1.86**	**1.80**	**1.74**	**1.69**	**1.63**	**1.57**	**1.51**	**1.40**	**1.36**	**1.28**	**1.21**
Grand Total	**13.44**	**13.05**	**14.21**	**12.73**	**12.00**	**11.14**	**10.47**	**9.79**	**9.11**	**8.53**	**7.97**	**6.98**	**6.56**	**5.87**	**5.16**

NOX - W. Nevada															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-1.71	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	0.00	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.03	-0.03	-0.04	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.00**	**-1.74**	**-0.03**	**-0.05**	**-0.05**	**-0.07**	**-0.07**	**-0.07**	**-0.07**	**-0.07**	**-0.06**	**-0.06**	**-0.06**	**-0.05**	**-0.05**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - W Nevada - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SERVICE AND COMMERCIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (FUEL COMBUSTION)	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.19	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.25	0.26
COATINGS AND RELATED PROCESS SOLVENTS	0.13	0.13	0.12	0.13	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.18
PRINTING	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11
ADHESIVES AND SEALANTS	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.22
CHEMICAL	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**0.72**	**0.73**	**0.73**	**0.75**	**0.76**	**0.77**	**0.78**	**0.79**	**0.80**	**0.81**	**0.82**	**0.86**	**0.86**	**0.88**	**0.92**
Area-Wide															
CONSUMER PRODUCTS	0.62	0.56	0.56	0.54	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.61	0.63	0.64	0.66
ARCHITECTURAL COATINGS AND RELATED PROCE	0.33	0.34	0.35	0.35	0.35	0.36	0.36	0.36	0.37	0.37	0.37	0.38	0.38	0.39	0.40
PESTICIDES/FERTILIZERS	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.12
ASPHALT PAVING / ROOFING	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27
RESIDENTIAL FUEL COMBUSTION	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.42
FARMING OPERATIONS	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.27	0.27	0.27	0.27	0.27	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
COOKING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (MISCELLANEOUS PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**2.08**	**2.04**	**2.04**	**2.03**	**2.04**	**2.06**	**2.07**	**2.09**	**2.11**	**2.13**	**2.15**	**2.19**	**2.21**	**2.25**	**2.32**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.46	1.11	1.04	0.89	0.82	0.73	0.66	0.58	0.52	0.47	0.43	0.36	0.33	0.29	0.25
LIGHT DUTY TRUCKS - 1 (LDT1)	1.24	0.96	0.95	0.90	0.88	0.85	0.83	0.80	0.78	0.75	0.73	0.68	0.65	0.59	0.51
LIGHT DUTY TRUCKS - 2 (LDT2)	0.62	0.57	0.56	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.37	0.34	0.33	0.31	0.29
MEDIUM DUTY TRUCKS (MDV)	0.23	0.24	0.24	0.23	0.22	0.22	0.21	0.20	0.19	0.19	0.18	0.17	0.16	0.15	0.14
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.09	0.09	0.08	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.08	0.07	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.11	0.09	0.08	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.40	0.41	0.50	0.43	0.40	0.37	0.35	0.33	0.31	0.29	0.27	0.24	0.23	0.20	0.18
MOTORCYCLES (MCY)	0.24	0.31	0.31	0.30	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.30	0.32
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEAVY DUTY GAS URBAN BUSES (UB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
MOTOR HOMES (MH)	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
On-Road Subtotal	**4.57**	**3.95**	**3.90**	**3.54**	**3.35**	**3.16**	**2.99**	**2.82**	**2.67**	**2.53**	**2.42**	**2.21**	**2.12**	**1.98**	**1.80**
Other Mobile															
AIRCRAFT	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
TRAINS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
RECREATIONAL BOATS	2.32	2.17	2.11	1.97	1.90	1.83	1.77	1.73	1.69	1.65	1.62	1.56	1.54	1.50	1.49
OFF-ROAD RECREATIONAL VEHICLES	0.84	1.04	1.09	1.16	1.19	1.23	1.27	1.31	1.35	1.40	1.45	1.55	1.60	1.72	1.91
OFF-ROAD EQUIPMENT	0.58	0.57	0.53	0.49	0.46	0.44	0.42	0.40	0.38	0.36	0.35	0.33	0.32	0.31	0.31
FARM EQUIPMENT	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02
FUEL STORAGE AND HANDLING	0.12	0.12	0.12	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04
Other Mobile Subtotal	**3.99**	**4.02**	**3.97**	**3.81**	**3.73**	**3.67**	**3.63**	**3.60**	**3.57**	**3.56**	**3.56**	**3.57**	**3.59**	**3.65**	**3.82**
Grand Total	**11.37**	**10.73**	**10.64**	**10.12**	**9.89**	**9.66**	**9.47**	**9.30**	**9.15**	**9.04**	**8.95**	**8.83**	**8.79**	**8.77**	**8.86**

ROG - W. Nevada															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.11	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.03
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Off-Road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**0.00**	**-0.12**	**0.00**	**-0.03**	**-0.04**	**-0.04**	**-0.04**	**-0.05**	**-0.05**	**-0.05**	**-0.05**	**-0.06**	**-0.06**	**-0.06**	**-0.07**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Fresno County

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NOX - FRESNO - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.26
COGENERATION	0.81	0.78	0.74	0.53	0.52	0.53	0.53	0.53	0.52	0.51	0.51	0.53	0.55	0.57	0.57
OIL AND GAS PRODUCTION (COMBUSTION)	2.72	1.76	1.85	1.86	1.83	1.81	1.79	1.77	1.76	1.74	1.72	1.70	1.68	1.66	1.64
MANUFACTURING AND INDUSTRIAL	3.22	3.51	3.57	3.66	3.71	3.79	3.87	3.95	4.04	4.12	4.20	4.28	4.33	4.42	4.51
FOOD AND AGRICULTURAL PROCESSING	8.73	8.69	8.14	5.63	4.90	4.18	3.65	3.15	2.64	2.15	1.67	1.64	1.63	1.61	1.59
SERVICE AND COMMERCIAL	0.73	0.68	0.69	0.71	0.71	0.72	0.72	0.72	0.73	0.74	0.75	0.75	0.76	0.76	0.77
OTHER (FUEL COMBUSTION)	0.56	0.46	0.44	0.41	0.39	0.38	0.36	0.35	0.34	0.33	0.32	0.30	0.30	0.28	0.29
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15
FOOD AND AGRICULTURE	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
MINERAL PROCESSES	0.85	0.89	0.90	0.94	0.96	0.97	1.00	1.02	1.03	1.06	1.07	1.11	1.13	1.17	1.22
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	3.60	3.72	2.25	2.37	2.42	2.49	2.54	2.59	2.66	2.71	2.78	2.88	2.95	3.05	3.21
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra-inventory Reductions (District Rules)	0.00	0.00	0.00	-0.13	-0.16	-0.19	-0.22	-0.24	-0.26	-0.28	-0.30	-0.31	-0.33	-0.38	-0.38
Stationary Subtotal	**21.66**	**20.93**	**19.02**	**16.44**	**15.76**	**15.15**	**14.72**	**14.32**	**13.94**	**13.56**	**13.20**	**13.39**	**13.50**	**13.65**	**13.95**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.89	0.85	0.84	0.82	0.82	0.82	0.82	0.82	0.83	0.83	0.83	0.84	0.84	0.84	0.85
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	3.89	3.84	3.83	3.81	3.80	3.80	3.79	3.78	3.77	3.76	3.75	3.74	3.73	3.71	3.71
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**4.79**	**4.70**	**4.68**	**4.64**	**4.63**	**4.63**	**4.62**	**4.62**	**4.61**	**4.60**	**4.60**	**4.58**	**4.58**	**4.57**	**4.57**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	7.34	5.05	4.63	3.85	3.51	3.17	2.84	2.55	2.30	2.07	1.88	1.56	1.44	1.25	1.03
LIGHT DUTY TRUCKS - 1 (LDT1)	2.42	1.86	1.70	1.41	1.28	1.16	1.05	0.96	0.88	0.80	0.73	0.60	0.55	0.46	0.37
LIGHT DUTY TRUCKS - 2 (LDT2)	5.66	4.43	4.14	3.61	3.38	3.15	2.92	2.70	2.50	2.31	2.13	1.83	1.70	1.48	1.24
MEDIUM DUTY TRUCKS (MDV)	3.49	2.98	2.78	2.42	2.28	2.15	2.02	1.89	1.76	1.64	1.53	1.33	1.24	1.07	0.86
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.13	0.98	0.93	0.86	0.83	0.82	0.80	0.79	0.78	0.77	0.76	0.74	0.74	0.73	0.71
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.18	0.18	0.17	0.17
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.49	0.44	0.42	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.20	0.19	0.17	0.14
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.46	0.41	0.39	0.35	0.33	0.32	0.30	0.29	0.28	0.27	0.26	0.24	0.23	0.22	0.21
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.07	0.84	0.79	0.67	0.64	0.60	0.56	0.53	0.51	0.49	0.46	0.42	0.39	0.35	0.30
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.53	0.69	0.67	0.61	0.60	0.56	0.53	0.50	0.47	0.44	0.41	0.36	0.33	0.29	0.23
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	4.51	4.69	4.52	4.04	3.86	3.56	3.28	3.01	2.75	2.52	2.30	1.92	1.76	1.49	1.19
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	35.05	37.70	45.88	39.23	37.02	33.92	30.96	28.22	25.67	23.34	21.27	17.81	16.38	13.99	11.53
MOTORCYCLES (MCY)	0.11	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.30
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.49	0.50	0.49	0.48	0.48	0.48	0.48	0.48	0.48	0.43	0.42	0.42	0.41	0.41	0.40
HEAVY DUTY GAS URBAN BUSES (UB)	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.05	0.06	0.06
SCHOOL BUSES (SB)	0.49	0.50	0.50	0.48	0.47	0.47	0.45	0.45	0.43	0.40	0.38	0.23	0.23	0.23	0.22
OTHER BUSES (OB)	0.22	0.26	0.25	0.24	0.24	0.22	0.21	0.20	0.19	0.17	0.16	0.14	0.13	0.11	0.09
MOTOR HOMES (MH)	0.23	0.20	0.20	0.18	0.18	0.18	0.17	0.16	0.16	0.15	0.14	0.12	0.11	0.10	0.08
On-Road Subtotal	**62.92**	**62.03**	**68.80**	**58.58**	**55.10**	**50.63**	**46.31**	**42.37**	**38.95**	**35.79**	**32.94**	**28.05**	**26.00**	**22.61**	**18.92**
Other Mobile															
AIRCRAFT	0.40	0.42	0.42	0.43	0.44	0.44	0.45	0.45	0.46	0.46	0.47	0.47	0.48	0.48	0.49
TRAINS	4.55	3.80	3.58	3.40	3.36	3.23	3.27	3.29	3.30	3.31	3.33	3.36	3.38	3.43	3.50
RECREATIONAL BOATS	0.40	0.53	0.57	0.61	0.61	0.61	0.61	0.61	0.61	0.62	0.63	0.64	0.65	0.66	0.68
OFF-ROAD RECREATIONAL VEHICLES	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.10	0.11
OFF-ROAD EQUIPMENT	10.87	10.22	9.95	9.13	8.70	8.25	7.88	7.52	7.14	6.77	6.36	5.61	5.28	4.72	4.16
FARM EQUIPMENT	18.96	16.96	16.29	14.63	13.94	13.37	12.63	11.71	10.81	10.03	9.27	7.89	7.24	6.06	4.62
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**35.22**	**31.98**	**30.87**	**28.27**	**27.11**	**25.97**	**24.91**	**23.66**	**22.39**	**21.27**	**20.12**	**18.06**	**17.12**	**15.44**	**13.56**
Grand Total	**124.60**	**119.64**	**123.37**	**107.93**	**102.61**	**96.38**	**90.56**	**84.96**	**79.89**	**75.22**	**70.86**	**64.09**	**61.20**	**56.27**	**51.01**

NOX - FRESNO															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-11.17	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.12	-1.55	-2.05	-2.18	-1.97	-1.76	-1.56	-1.37	-1.20	-1.04	-0.89	-0.61	-0.49	-0.30	-0.13
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Idling	0.00	-0.36	-0.84	-1.82	-1.86	-1.89	-1.92	-1.96	-2.01	-2.06	-2.12	-2.24	-2.31	-2.43	-2.57
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
Moyer	-0.11	-0.14	-0.12	-0.08	-0.10	-0.11	-0.13	-0.13	-0.13	-0.13	-0.12	-0.09	-0.06	0.00	0.00
Off-road	0.00	-0.02	-0.03	-0.12	-0.20	-0.35	-0.35	-0.36	-0.38	-0.35	-0.32	-0.27	-0.25	-0.21	-0.16
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rule 4702	1.58	1.84	1.54	-0.55	-1.11	-1.67	-2.01	-2.32	-2.61	-2.90	-3.17	-2.76	-2.55	-2.11	-1.43
Summary	**1.36**	**-11.41**	**-1.50**	**-4.76**	**-5.25**	**-5.80**	**-5.98**	**-6.15**	**-6.34**	**-6.49**	**-6.63**	**-5.98**	**-5.67**	**-5.06**	**-4.30**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - FRESNO - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COGENERATION	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05	0.05
OIL AND GAS PRODUCTION (COMBUSTION)	0.07	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
MANUFACTURING AND INDUSTRIAL	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
FOOD AND AGRICULTURAL PROCESSING	0.60	0.59	0.59	0.58	0.58	0.57	0.57	0.57	0.56	0.56	0.56	0.55	0.55	0.54	0.54
SERVICE AND COMMERCIAL	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER (FUEL COMBUSTION)	0.07	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LANDFILLS	1.15	1.22	1.24	1.29	1.31	1.33	1.35	1.38	1.40	1.42	1.44	1.48	1.50	1.54	1.61
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	16.05	16.04	16.56	17.55	17.71	17.85	17.98	18.05	18.90	19.76	19.88	20.16	20.37	20.82	21.50
LAUNDERING	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
DEGREASING	1.73	0.32	0.33	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.36	0.37	0.37	0.38	0.39
COATINGS AND RELATED PROCESS SOLVENTS	1.63	1.52	1.54	1.64	1.52	1.57	1.61	1.66	1.71	1.76	1.80	1.87	1.91	1.98	2.08
PRINTING	0.46	0.47	0.48	0.50	0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.59	0.60	0.62	0.65
ADHESIVES AND SEALANTS	0.15	0.15	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.11
OTHER (CLEANING AND SURFACE COATINGS)	2.78	3.13	3.26	3.46	3.56	3.67	3.77	3.87	3.97	4.07	4.17	4.34	4.43	4.61	4.86
OIL AND GAS PRODUCTION	1.46	1.40	1.40	1.37	1.35	1.33	1.31	1.30	1.28	1.27	1.25	1.23	1.21	1.19	1.16
PETROLEUM MARKETING	1.88	2.01	2.04	2.10	2.14	2.18	2.21	2.25	2.28	2.32	2.36	2.43	2.47	2.55	2.67
OTHER (PETROLEUM PRODUCTION AND MARKETI	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHEMICAL	0.50	0.53	0.54	0.55	0.56	0.56	0.57	0.58	0.58	0.59	0.60	0.61	0.62	0.63	0.65
FOOD AND AGRICULTURE	3.73	3.58	3.58	3.27	3.28	3.29	3.30	3.31	3.32	3.33	3.35	3.37	3.38	3.41	3.44
MINERAL PROCESSES	0.09	0.10	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.14
METAL PROCESSES	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (INDUSTRIAL PROCESSES)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.05	0.06	0.07
Extra-inventory Reductions (District Rules)				-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.21	-0.21	-0.21	-0.21
Stationary Subtotal	**32.56**	**31.38**	**32.15**	**32.99**	**33.20**	**33.58**	**33.92**	**34.21**	**35.28**	**36.37**	**36.71**	**37.42**	**37.85**	**38.72**	**40.04**
Area-Wide															
CONSUMER PRODUCTS	6.24	5.75	5.75	5.82	5.88	5.94	6.04	6.13	6.23	6.32	6.42	6.61	6.70	6.89	7.21
ARCHITECTURAL COATINGS AND RELATED PROCE	3.42	2.79	2.82	2.87	2.90	2.93	2.96	2.98	3.02	3.05	3.07	3.15	3.19	3.27	3.41
PESTICIDES/FERTILIZERS	5.07	5.24	5.19	5.08	5.03	4.98	4.94	4.91	4.88	4.85	4.82	4.76	4.74	4.68	4.66
ASPHALT PAVING / ROOFING	0.54	0.55	0.55	0.56	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57	0.57	0.58	0.58
RESIDENTIAL FUEL COMBUSTION	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.11	0.11	0.11
FARMING OPERATIONS	11.25	11.70	11.85	10.59	9.11	9.20	9.32	9.45	9.57	9.69	9.82	10.06	10.18	10.43	10.80
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
MANAGED BURNING AND DISPOSAL	7.13	7.10	7.09	6.42	6.41	6.39	6.38	6.36	6.34	6.33	6.31	6.27	6.26	6.22	6.19
COOKING	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.15	0.15
Area-Wide Subtotal	**33.94**	**33.40**	**33.52**	**31.61**	**30.16**	**30.27**	**30.47**	**30.68**	**30.88**	**31.08**	**31.29**	**31.72**	**31.94**	**32.38**	**33.17**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	9.50	7.35	6.76	5.65	5.21	4.74	4.31	3.92	3.58	3.27	3.02	2.60	2.43	2.18	1.90
LIGHT DUTY TRUCKS - 1 (LDT1)	2.83	2.36	2.16	1.79	1.63	1.46	1.35	1.26	1.16	1.08	1.00	0.86	0.80	0.73	0.65
LIGHT DUTY TRUCKS - 2 (LDT2)	4.16	3.72	3.54	3.25	3.14	3.02	2.89	2.75	2.62	2.49	2.38	2.18	2.09	1.96	1.84
MEDIUM DUTY TRUCKS (MDV)	2.32	2.05	1.95	1.78	1.73	1.68	1.63	1.57	1.52	1.47	1.42	1.33	1.29	1.20	1.08
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.41	1.17	1.04	0.85	0.79	0.75	0.71	0.68	0.66	0.63	0.61	0.57	0.56	0.52	0.46
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.28	0.26	0.24	0.21	0.20	0.19	0.18	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.76	0.61	0.56	0.46	0.41	0.37	0.33	0.29	0.26	0.23	0.20	0.16	0.14	0.11	0.09
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.24	0.19	0.17	0.14	0.13	0.12	0.11	0.10	0.09	0.09	0.08	0.07	0.06	0.05	0.04
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.10	0.11	0.11	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	2.55	2.78	3.41	3.04	2.87	2.68	2.51	2.35	2.20	2.06	1.93	1.70	1.61	1.45	1.27
MOTORCYCLES (MCY)	0.69	1.22	1.18	1.11	1.08	1.06	1.04	1.03	1.03	1.03	1.04	1.05	1.07	1.10	1.14
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SCHOOL BUSES (SB)	0.06	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03
OTHER BUSES (OB)	0.07	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02
MOTOR HOMES (MH)	0.09	0.07	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01
On-Road Subtotal	**25.11**	**22.09**	**21.38**	**18.61**	**17.52**	**16.41**	**15.38**	**14.43**	**13.56**	**12.77**	**12.08**	**10.90**	**10.40**	**9.61**	**8.76**
Other Mobile															
AIRCRAFT	1.06	1.11	1.11	1.13	1.14	1.15	1.15	1.16	1.17	1.18	1.19	1.20	1.20	1.22	1.23
TRAINS	0.26	0.26	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
RECREATIONAL BOATS	3.45	3.40	3.32	3.15	3.05	2.97	2.90	2.85	2.80	2.76	2.73	2.68	2.66	2.63	2.65
OFF-ROAD RECREATIONAL VEHICLES	2.14	2.68	2.80	2.96	3.04	3.14	3.23	3.34	3.45	3.56	3.68	3.94	4.08	4.38	4.86
OFF-ROAD EQUIPMENT	4.91	5.00	4.72	4.30	4.11	3.91	3.73	3.56	3.40	3.24	3.11	2.89	2.81	2.69	2.69
FARM EQUIPMENT	3.87	3.49	3.31	2.94	2.78	2.65	2.49	2.27	2.05	1.87	1.71	1.43	1.29	1.09	0.89
FUEL STORAGE AND HANDLING	1.28	1.24	1.18	0.87	0.80	0.75	0.71	0.67	0.63	0.60	0.57	0.53	0.52	0.49	0.45
Other Mobile Subtotal	**16.98**	**17.17**	**16.70**	**15.59**	**15.18**	**14.82**	**14.46**	**14.09**	**13.75**	**13.47**	**13.24**	**12.92**	**12.81**	**12.73**	**13.03**
Grand Total	**108.59**	**104.05**	**103.75**	**98.81**	**96.05**	**95.07**	**94.23**	**93.40**	**93.47**	**93.70**	**93.31**	**92.96**	**93.00**	**93.44**	**95.00**

ROG - FRESNO															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.78	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.37	-0.29	-0.28	-0.26	-0.25	-0.24	-0.24	-0.24	-0.24	-0.23	-0.23	-0.23	-0.23	-0.22	-0.22
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
Moyer	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	-0.02	-0.02	-0.03	-0.04	-0.04	-0.05	-0.06	-0.06	-0.07	-0.06
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SJV Composting Green Waste	13.20	13.18	13.69	14.68	14.83	14.97	15.10	15.15	16.00	16.85	16.97	17.23	17.44	17.88	18.54
SJV Composting Biosolids	2.71	2.71	2.71	2.71	2.72	2.73	2.72	2.73	2.73	2.74	2.73	2.75	2.74	2.75	2.76
SJV Rule 4602-4612	0.00	0.00	0.00	0.00	-0.17	-0.17	-0.17	-0.17	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.18
SJV Rule 4694	0.00	0.00	0.00	-0.34	-0.34	-0.34	-0.34	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.36
SJV Rule 4570	0.00	0.00	0.00	-1.57	-3.20	-3.26	-3.34	-3.41	-3.49	-3.57	-3.65	-3.80	-3.88	-4.03	-4.25
Summary	**15.54**	**14.82**	**16.12**	**15.21**	**13.58**	**13.65**	**13.69**	**13.66**	**14.43**	**15.20**	**15.23**	**15.35**	**15.48**	**15.77**	**16.22**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Kings County

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NOX - KINGS - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
COGENERATION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
OIL AND GAS PRODUCTION (COMBUSTION)	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANUFACTURING AND INDUSTRIAL	2.60	1.82	1.93	2.06	2.08	2.10	2.13	2.16	2.19	2.22	2.25	2.29	2.31	2.35	2.36
FOOD AND AGRICULTURAL PROCESSING	3.28	3.32	3.13	2.19	1.92	1.64	1.44	1.25	1.06	0.86	0.67	0.67	0.67	0.67	0.67
SERVICE AND COMMERCIAL	0.62	0.59	0.58	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.57
OTHER (FUEL COMBUSTION)	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra-inventory Reductions (District Rules)	0.00	0.00	0.00	-0.04	-0.05	-0.06	-0.07	-0.07	-0.08	-0.08	-0.09	-0.09	-0.09	-0.11	-0.10
Stationary Subtotal	**6.66**	**5.89**	**5.79**	**4.92**	**4.65**	**4.39**	**4.21**	**4.04**	**3.87**	**3.70**	**3.54**	**3.57**	**3.59**	**3.61**	**3.63**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**0.20**	**0.20**	**0.20**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.31	0.98	0.90	0.76	0.71	0.66	0.60	0.54	0.49	0.44	0.40	0.33	0.30	0.26	0.21
LIGHT DUTY TRUCKS - 1 (LDT1)	0.70	0.53	0.49	0.41	0.39	0.37	0.34	0.32	0.29	0.27	0.24	0.20	0.19	0.16	0.12
LIGHT DUTY TRUCKS - 2 (LDT2)	0.99	0.87	0.80	0.68	0.66	0.63	0.59	0.55	0.51	0.47	0.44	0.38	0.35	0.31	0.25
MEDIUM DUTY TRUCKS (MDV)	0.52	0.51	0.47	0.39	0.37	0.36	0.33	0.31	0.30	0.28	0.26	0.23	0.21	0.19	0.15
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.11	0.11	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.17	0.18	0.17	0.15	0.15	0.15	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.10
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.02	0.23	0.19	0.14	0.13	0.12	0.11	0.09	0.09	0.08	0.08	0.07	0.06	0.06	0.05
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.08	0.11	0.11	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.06	0.05	0.05	0.04
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.71	0.75	0.71	0.62	0.61	0.59	0.55	0.51	0.47	0.44	0.40	0.33	0.29	0.24	0.19
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	13.36	14.39	17.28	14.48	14.13	13.47	12.45	11.44	10.43	9.46	8.55	7.06	6.45	5.47	4.54
MOTORCYCLES (MCY)	0.03	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.09	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.19
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
SCHOOL BUSES (SB)	0.11	0.12	0.11	0.11	0.10	0.11	0.10	0.10	0.09	0.09	0.08	0.05	0.05	0.05	0.05
OTHER BUSES (OB)	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01
MOTOR HOMES (MH)	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01
On-Road Subtotal	**18.38**	**19.21**	**21.78**	**18.14**	**17.61**	**16.76**	**15.47**	**14.21**	**13.06**	**11.96**	**10.92**	**9.18**	**8.46**	**7.28**	**6.11**
Other Mobile															
AIRCRAFT	1.68	1.72	1.82	2.70	2.79	2.95	3.13	3.19	3.25	3.32	3.38	3.52	3.59	3.74	3.74
TRAINS	1.31	1.09	1.02	0.96	0.95	0.91	0.94	0.95	0.96	0.96	0.97	0.98	0.99	1.01	1.03
RECREATIONAL BOATS	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OFF-ROAD RECREATIONAL VEHICLES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFF-ROAD EQUIPMENT	0.78	0.73	0.71	0.66	0.63	0.60	0.58	0.56	0.54	0.51	0.49	0.44	0.43	0.40	0.37
FARM EQUIPMENT	3.68	3.32	3.20	2.89	2.76	2.65	2.52	2.34	2.17	2.02	1.88	1.61	1.48	1.25	0.96
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**7.45**	**6.87**	**6.76**	**7.22**	**7.14**	**7.13**	**7.17**	**7.05**	**6.92**	**6.83**	**6.73**	**6.57**	**6.50**	**6.39**	**6.11**
Grand Total	**32.70**	**32.17**	**34.52**	**30.47**	**29.59**	**28.46**	**27.04**	**25.50**	**24.05**	**22.69**	**21.38**	**19.51**	**18.73**	**17.48**	**16.04**

NOX - KINGS															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-4.26	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.05	-0.59	-0.77	-0.80	-0.75	-0.69	-0.62	-0.55	-0.48	-0.42	-0.35	-0.24	-0.19	-0.12	-0.05
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	-0.14	-0.32	-0.67	-0.71	-0.75	-0.77	-0.80	-0.82	-0.83	-0.85	-0.89	-0.91	-0.95	-1.01
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	-0.02	-0.03	-0.03	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.01	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rule 4702	0.60	0.70	0.59	-0.21	-0.44	-0.66	-0.79	-0.92	-1.05	-1.17	-1.28	-1.13	-1.05	-0.88	-0.60
Summary	**0.53**	**-4.32**	**-0.52**	**-1.71**	**-1.93**	**-2.16**	**-2.25**	**-2.33**	**-2.41**	**-2.48**	**-2.54**	**-2.30**	**-2.19**	**-1.96**	**-1.68**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - KINGS - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OIL AND GAS PRODUCTION (COMBUSTION)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANUFACTURING AND INDUSTRIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
FOOD AND AGRICULTURAL PROCESSING	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
SERVICE AND COMMERCIAL	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
OTHER (FUEL COMBUSTION)	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOIL REMEDIATION	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09
OTHER (WASTE DISPOSAL)	8.68	8.82	9.10	9.66	9.75	9.83	9.91	9.96	10.44	10.92	10.99	11.16	11.29	11.56	12.08
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.21	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
COATINGS AND RELATED PROCESS SOLVENTS	0.21	0.22	0.23	0.24	0.22	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.27	0.28
PRINTING	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
ADHESIVES AND SEALANTS	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OIL AND GAS PRODUCTION	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
PETROLEUM MARKETING	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.29	0.29	0.30	0.31
CHEMICAL	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.14	0.15	0.15
FOOD AND AGRICULTURE	0.94	0.94	0.94	0.95	0.96	0.97	0.97	0.98	0.99	0.99	1.00	1.01	1.02	1.03	1.05
MINERAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Extra-inventory Reductions (District Rules)	0.00	0.00	0.00	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Stationary Subtotal	**10.97**	**10.94**	**11.23**	**11.79**	**11.88**	**11.98**	**12.07**	**12.14**	**12.63**	**13.12**	**13.23**	**13.43**	**13.58**	**13.88**	**14.46**
Area-Wide															
CONSUMER PRODUCTS	1.01	0.95	0.95	0.96	0.97	0.98	1.00	1.01	1.03	1.05	1.06	1.10	1.11	1.15	1.22
ARCHITECTURAL COATINGS AND RELATED PROCES	0.55	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.48	0.49	0.50	0.52
PESTICIDES/FERTILIZERS	1.50	1.51	1.50	1.49	1.49	1.49	1.48	1.48	1.48	1.48	1.48	1.47	1.47	1.47	1.47
ASPHALT PAVING / ROOFING	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
RESIDENTIAL FUEL COMBUSTION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
FARMING OPERATIONS	4.02	4.32	4.42	4.02	3.49	3.55	3.64	3.72	3.81	3.89	3.98	4.15	4.23	4.40	4.66
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANAGED BURNING AND DISPOSAL	0.21	0.21	0.21	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.18	0.18
COOKING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Area-Wide Subtotal	**7.43**	**7.56**	**7.65**	**7.24**	**6.72**	**6.80**	**6.90**	**7.00**	**7.11**	**7.21**	**7.31**	**7.52**	**7.62**	**7.83**	**8.18**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	1.51	1.22	1.12	0.93	0.88	0.82	0.74	0.67	0.61	0.56	0.51	0.43	0.40	0.35	0.30
LIGHT DUTY TRUCKS - 1 (LDT1)	0.67	0.55	0.51	0.43	0.41	0.39	0.36	0.33	0.31	0.29	0.26	0.23	0.21	0.18	0.16
LIGHT DUTY TRUCKS - 2 (LDT2)	0.67	0.62	0.58	0.51	0.50	0.49	0.46	0.44	0.41	0.39	0.37	0.34	0.32	0.30	0.27
MEDIUM DUTY TRUCKS (MDV)	0.32	0.31	0.28	0.24	0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.18	0.18	0.16	0.15
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.14	0.12	0.10	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.05	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.10	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.00	1.10	1.33	1.17	1.14	1.11	1.05	0.99	0.92	0.86	0.79	0.69	0.65	0.58	0.51
MOTORCYCLES (MCY)	0.14	0.27	0.26	0.24	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.24
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.02	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06
SCHOOL BUSES (SB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER BUSES (OB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
MOTOR HOMES (MH)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
On-Road Subtotal	**4.74**	**4.49**	**4.46**	**3.83**	**3.71**	**3.56**	**3.34**	**3.13**	**2.94**	**2.75**	**2.58**	**2.30**	**2.18**	**2.00**	**1.81**
Other Mobile															
AIRCRAFT	3.15	3.24	3.41	5.04	5.19	5.49	5.82	5.94	6.05	6.17	6.29	6.54	6.67	6.94	6.94
TRAINS	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
RECREATIONAL BOATS	0.14	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18
OFF-ROAD RECREATIONAL VEHICLES	0.06	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.10
OFF-ROAD EQUIPMENT	0.49	0.52	0.49	0.45	0.43	0.40	0.38	0.36	0.35	0.33	0.32	0.30	0.29	0.28	0.28
FARM EQUIPMENT	0.76	0.70	0.66	0.59	0.56	0.54	0.51	0.46	0.42	0.38	0.35	0.30	0.27	0.23	0.19
FUEL STORAGE AND HANDLING	0.21	0.20	0.19	0.14	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.08	0.08
Other Mobile Subtotal	**4.88**	**4.98**	**5.07**	**6.53**	**6.62**	**6.86**	**7.13**	**7.18**	**7.24**	**7.30**	**7.38**	**7.55**	**7.65**	**7.87**	**7.85**
Grand Total	**28.02**	**27.96**	**28.42**	**29.39**	**28.92**	**29.20**	**29.44**	**29.45**	**29.90**	**30.38**	**30.50**	**30.80**	**31.03**	**31.58**	**32.29**

ROG - KINGS															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.31	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.20	-0.25	-0.25	-0.25	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Moyer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SJV Composting Green Waste	7.14	7.25	7.53	8.08	8.16	8.24	8.32	8.36	8.84	9.31	9.38	9.54	9.67	9.93	10.43
SJV Composting Biosolids	1.47	1.49	1.49	1.49	1.50	1.50	1.50	1.51	1.51	1.52	1.51	1.52	1.52	1.53	1.55
SJV Rule 4602-4612	0.00	0.00	0.00	0.00	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
SJV Rule 4694	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SJV Rule 4570	0.00	0.00	0.00	-0.60	-1.22	-1.26	-1.30	-1.35	-1.39	-1.43	-1.48	-1.57	-1.61	-1.70	-1.84
Summary	**8.41**	**8.18**	**8.77**	**8.73**	**8.17**	**8.22**	**8.25**	**8.25**	**8.68**	**9.11**	**9.14**	**9.22**	**9.30**	**9.48**	**9.87**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Coachella Valley Upwind Areas

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Orange County

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NOX - ORANGE COUNTY - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.33	0.47	0.46	0.42	0.39	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36
COGENERATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION (COMBUSTION)	0.60	0.42	0.40	0.36	0.35	0.32	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
MANUFACTURING AND INDUSTRIAL	2.27	2.17	2.06	2.07	2.07	2.04	2.00	1.98	1.96	1.95	1.94	1.96	1.96	1.98	2.01
FOOD AND AGRICULTURAL PROCESSING	0.26	0.22	0.14	0.13	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.10	0.10	0.10
SERVICE AND COMMERCIAL	3.56	3.33	3.20	2.96	2.86	2.52	2.42	2.31	2.20	2.10	2.04	2.00	1.98	1.93	1.94
OTHER (FUEL COMBUSTION)	1.25	1.16	1.11	1.02	0.98	0.93	0.89	0.86	0.82	0.79	0.75	0.70	0.68	0.63	0.63
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.18	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.23
INCINERATORS	0.12	0.21	0.25	0.25	0.26	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.27	0.28
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION	0.02	0.20	0.28	0.25	0.24	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
METAL PROCESSES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Stationary Subtotal	**8.64**	**8.41**	**8.14**	**7.71**	**7.52**	**7.02**	**6.79**	**6.62**	**6.47**	**6.31**	**6.22**	**6.15**	**6.11**	**6.03**	**6.08**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	4.06	3.84	3.54	3.58	3.62	3.02	3.05	3.07	3.09	3.12	2.74	2.77	2.78	2.80	2.83
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**4.07**	**3.85**	**3.55**	**3.60**	**3.64**	**3.04**	**3.06**	**3.08**	**3.10**	**3.13**	**2.76**	**2.79**	**2.80**	**2.82**	**2.84**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	25.55	17.36	15.75	13.20	12.02	10.88	9.87	8.95	8.13	7.37	6.72	5.59	5.12	4.38	3.48
LIGHT DUTY TRUCKS - 1 (LDT1)	4.40	3.22	2.92	2.46	2.26	2.08	1.92	1.77	1.63	1.50	1.37	1.15	1.05	0.90	0.72
LIGHT DUTY TRUCKS - 2 (LDT2)	18.05	13.64	12.42	10.64	9.97	9.38	8.83	8.27	7.74	7.23	6.75	5.86	5.47	4.79	3.98
MEDIUM DUTY TRUCKS (MDV)	9.83	8.04	7.40	6.38	5.99	5.65	5.37	5.08	4.79	4.51	4.23	3.70	3.46	3.02	2.46
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	4.67	3.93	3.34	2.83	2.77	2.72	2.67	2.64	2.62	2.59	2.57	2.51	2.48	2.43	2.32
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.68	0.67	0.60	0.55	0.54	0.54	0.53	0.53	0.52	0.51	0.50	0.48	0.48	0.46	0.43
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.41	1.50	1.26	1.00	0.95	0.91	0.86	0.81	0.76	0.71	0.67	0.58	0.54	0.48	0.40
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.60	1.46	1.26	1.04	0.99	0.93	0.86	0.79	0.72	0.65	0.59	0.47	0.42	0.33	0.25
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.12	2.78	2.45	1.97	1.93	1.80	1.69	1.61	1.54	1.48	1.42	1.29	1.23	1.12	0.96
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	1.71	1.94	1.74	1.46	1.43	1.34	1.26	1.18	1.11	1.04	0.98	0.87	0.82	0.72	0.59
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	13.43	13.92	12.10	9.75	9.32	8.69	8.02	7.41	6.82	6.23	5.71	4.80	4.39	3.69	2.89
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	13.36	14.39	16.17	13.33	12.92	12.23	11.40	10.56	9.71	8.91	8.14	6.81	6.28	5.42	4.70
MOTORCYCLES (MCY)	0.38	0.64	0.65	0.66	0.66	0.66	0.66	0.67	0.67	0.68	0.68	0.69	0.69	0.70	0.65
HEAVY DUTY DIESEL URBAN BUSES (UB)	1.79	1.70	1.71	1.73	1.74	1.74	1.73	1.72	1.72	1.69	1.68	1.66	1.61	1.50	1.38
HEAVY DUTY GAS URBAN BUSES (UB)	0.18	0.16	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.18	0.19
SCHOOL BUSES (SB)	0.70	0.72	0.74	0.77	0.78	0.80	0.82	0.83	0.85	0.86	0.88	0.90	0.91	0.95	0.97
OTHER BUSES (OB)	0.65	0.64	0.64	0.60	0.58	0.54	0.51	0.47	0.44	0.40	0.37	0.32	0.29	0.25	0.20
MOTOR HOMES (MH)	0.80	0.70	0.67	0.61	0.58	0.54	0.51	0.48	0.45	0.42	0.39	0.34	0.32	0.28	0.23
On-Road Subtotal	**99.32**	**87.41**	**81.99**	**69.15**	**65.61**	**61.60**	**57.66**	**53.94**	**50.39**	**46.97**	**43.85**	**38.18**	**35.73**	**31.59**	**26.80**
Other Mobile															
SHIPS AND COMMERCIAL BOATS	3.86	4.47	4.71	5.26	5.56	5.90	6.28	6.69	7.14	7.64	8.19	9.44	10.16	11.90	15.45
AIRCRAFT	1.36	1.47	1.51	1.59	1.63	1.67	1.68	1.69	1.70	1.71	1.72	1.73	1.74	1.76	1.76
TRAINS	5.06	4.30	4.08	3.84	3.77	2.69	2.98	3.11	3.18	3.25	3.31	3.46	3.54	3.70	3.97
SHIPS AND COMMERCIAL BOATS	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.13
RECREATIONAL BOATS	3.60	4.59	4.85	5.07	5.04	5.01	5.00	5.00	5.00	5.02	5.04	5.09	5.12	5.15	5.17
OFF-ROAD RECREATIONAL VEHICLES	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OFF-ROAD EQUIPMENT	57.49	53.34	51.69	47.34	45.22	42.62	40.59	38.62	36.62	34.60	32.37	28.35	26.59	23.53	20.07
FARM EQUIPMENT	1.23	1.10	1.06	0.96	0.91	0.85	0.81	0.75	0.69	0.64	0.59	0.50	0.46	0.38	0.29
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**72.77**	**69.45**	**68.07**	**64.20**	**62.29**	**58.90**	**57.49**	**56.01**	**54.48**	**52.99**	**51.37**	**48.73**	**47.76**	**46.58**	**46.86**
Grand Total	**184.80**	**169.12**	**161.75**	**144.65**	**139.05**	**130.56**	**125.00**	**119.65**	**114.43**	**109.40**	**104.19**	**95.85**	**92.39**	**87.03**	**82.58**

NOX - ORANGE COUNTY															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-4.26	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.05	-0.67	-0.83	-0.80	-0.74	-0.68	-0.61	-0.54	-0.48	-0.42	-0.36	-0.24	-0.19	-0.12	-0.06
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	0.00
Idling	0.00	-0.10	-0.26	-0.56	-0.59	-0.62	-0.64	-0.67	-0.70	-0.73	-0.75	-0.79	-0.81	-0.84	-0.93
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02
Moyer	-0.29	-0.38	-0.32	-0.21	-0.27	-0.33	-0.38	-0.38	-0.38	-0.38	-0.34	-0.26	-0.18	0.00	0.00
Off-road	0.00	-0.02	-0.03	-0.14	-0.23	-0.95	-0.96	-0.97	-0.99	-0.97	-0.96	-0.93	-0.93	-0.94	-0.97
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.34**	**-5.43**	**-1.46**	**-1.73**	**-1.85**	**-2.60**	**-2.62**	**-2.59**	**-2.57**	**-2.52**	**-2.43**	**-2.25**	**-2.14**	**-1.93**	**-1.98**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - ORANGE COUNTY - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.08	0.06	0.07	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
COGENERATION	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OIL AND GAS PRODUCTION (COMBUSTION)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANUFACTURING AND INDUSTRIAL	0.20	0.20	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23
FOOD AND AGRICULTURAL PROCESSING	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SERVICE AND COMMERCIAL	0.37	0.39	0.39	0.40	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.43	0.44	0.44
OTHER (FUEL COMBUSTION)	0.15	0.14	0.13	0.11	0.11	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.06	0.06	0.06
SEWAGE TREATMENT	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
LANDFILLS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
INCINERATORS	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (WASTE DISPOSAL)	2.45	2.57	2.60	2.35	2.23	2.26	2.28	2.30	2.32	2.35	2.37	2.40	2.42	2.45	2.48
LAUNDERING	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
DEGREASING	4.86	2.15	2.21	2.36	2.45	2.53	2.55	2.57	2.60	2.62	2.64	2.70	2.73	2.78	2.87
COATINGS AND RELATED PROCESS SOLVENTS	5.37	5.22	5.09	4.39	4.50	4.57	4.62	4.67	4.72	4.77	4.81	4.91	4.95	5.05	5.19
PRINTING	1.46	1.43	0.91	0.93	0.94	0.95	0.95	0.95	0.95	0.96	0.96	0.97	0.97	0.98	0.99
ADHESIVES AND SEALANTS	1.04	0.96	1.00	1.08	1.12	1.16	1.17	1.18	1.19	1.20	1.20	1.23	1.24	1.27	1.31
OTHER (CLEANING AND SURFACE COATINGS)	0.23	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
OIL AND GAS PRODUCTION	0.68	0.33	0.28	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	5.53	5.39	5.37	5.30	5.26	5.28	5.35	5.42	5.48	5.55	5.62	5.76	5.83	5.98	6.19
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	2.81	2.21	2.29	2.44	2.52	2.60	2.63	2.66	2.69	2.72	2.75	2.82	2.85	2.92	3.03
FOOD AND AGRICULTURE	0.47	0.49	0.50	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55	0.56	0.56	0.57	0.59
MINERAL PROCESSES	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.04	0.05	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09
OTHER (INDUSTRIAL PROCESSES)	1.36	1.42	1.44	1.48	1.50	1.52	1.53	1.55	1.56	1.57	1.59	1.61	1.62	1.64	1.66
Stationary Subtotal	**27.31**	**23.34**	**22.85**	**22.25**	**22.44**	**22.82**	**23.03**	**23.25**	**23.47**	**23.69**	**23.91**	**24.39**	**24.62**	**25.09**	**25.78**
Area-Wide															
CONSUMER PRODUCTS	21.59	19.57	19.58	18.99	19.23	19.44	19.61	19.78	19.96	20.13	20.30	20.56	20.69	20.96	21.20
ARCHITECTURAL COATINGS AND RELATED PROCE	11.16	8.88	5.94	5.14	5.18	5.21	5.24	5.28	5.31	5.34	5.38	5.41	5.43	5.47	5.53
PESTICIDES/FERTILIZERS	1.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ASPHALT PAVING / ROOFING	0.15	0.17	0.17	0.18	0.18	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21
RESIDENTIAL FUEL COMBUSTION	0.24	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27
FARMING OPERATIONS	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MANAGED BURNING AND DISPOSAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COOKING	0.35	0.37	0.38	0.39	0.40	0.41	0.41	0.41	0.42	0.42	0.43	0.43	0.43	0.44	0.45
Area-Wide Subtotal	**34.79**	**30.34**	**27.44**	**26.07**	**26.36**	**26.62**	**26.83**	**27.04**	**27.26**	**27.47**	**27.68**	**27.99**	**28.15**	**28.46**	**28.78**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	32.11	23.54	21.30	17.78	16.29	14.85	13.64	12.57	11.62	10.78	10.07	8.87	8.35	7.50	6.42
LIGHT DUTY TRUCKS - 1 (LDT1)	4.45	3.59	3.25	2.76	2.55	2.36	2.23	2.11	1.99	1.87	1.77	1.57	1.49	1.38	1.24
LIGHT DUTY TRUCKS - 2 (LDT2)	10.81	8.88	8.26	7.49	7.31	7.17	7.04	6.91	6.75	6.60	6.46	6.16	6.02	5.79	5.48
MEDIUM DUTY TRUCKS (MDV)	5.50	4.66	4.34	3.92	3.81	3.73	3.69	3.63	3.56	3.49	3.42	3.26	3.18	3.02	2.77
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	3.14	2.76	2.28	1.78	1.71	1.65	1.62	1.58	1.55	1.53	1.51	1.46	1.44	1.39	1.29
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.49	0.48	0.41	0.34	0.33	0.32	0.31	0.31	0.29	0.28	0.27	0.25	0.24	0.23	0.20
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.29	1.16	0.94	0.69	0.64	0.59	0.55	0.51	0.47	0.44	0.41	0.35	0.32	0.28	0.24
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.58	0.56	0.48	0.40	0.38	0.36	0.34	0.31	0.29	0.26	0.23	0.19	0.17	0.13	0.09
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.19	0.23	0.20	0.18	0.17	0.17	0.17	0.17	0.16	0.16	0.15	0.14	0.14	0.13	0.13
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.05	1.16	1.31	1.10	1.06	1.02	0.97	0.91	0.86	0.80	0.74	0.64	0.60	0.53	0.48
MOTORCYCLES (MCY)	2.11	3.00	2.92	2.76	2.68	2.62	2.58	2.56	2.55	2.54	2.54	2.53	2.53	2.55	2.40
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
HEAVY DUTY GAS URBAN BUSES (UB)	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SCHOOL BUSES (SB)	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07
OTHER BUSES (OB)	0.11	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.05	0.04
MOTOR HOMES (MH)	0.22	0.16	0.15	0.12	0.10	0.09	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.03	0.02
On-Road Subtotal	**62.33**	**50.60**	**46.25**	**39.71**	**37.44**	**35.34**	**33.61**	**32.02**	**30.53**	**29.18**	**28.00**	**25.83**	**24.88**	**23.30**	**21.09**
Other Mobile															
SHIPS AND COMMERCIAL BOATS	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
AIRCRAFT	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
TRAINS	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
SHIPS AND COMMERCIAL BOATS	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
RECREATIONAL BOATS	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73
OFF-ROAD RECREATIONAL VEHICLES	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
OFF-ROAD EQUIPMENT	27.25	27.25	27.25	27.24	27.24	27.21	27.17	27.14	27.11	27.07	27.05	27.00	26.98	26.96	27.02
FARM EQUIPMENT	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
FUEL STORAGE AND HANDLING	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54	4.54
Other Mobile Subtotal	**47.91**	**47.42**	**45.33**	**41.27**	**39.63**	**38.14**	**36.79**	**35.58**	**34.50**	**33.53**	**32.69**	**31.37**	**30.93**	**30.32**	**30.17**
Grand Total	**172.33**	**151.70**	**141.87**	**129.30**	**125.87**	**122.91**	**120.26**	**117.90**	**115.76**	**113.87**	**112.28**	**109.58**	**108.58**	**107.16**	**105.82**

ROG - ORANGE COUNTY															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.33	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.56	-0.21	-0.12	0.04	0.11	0.18	0.21	0.24	0.26	0.29	0.32	0.37	0.39	0.43	0.49
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.00	-0.07	-0.09	-0.11	-0.16	-0.18	-0.23	-0.30
Moyer	0.00	0.00	-0.01	-0.02	-0.03	-0.04	-0.05	-0.05	-0.05	-0.05	-0.05	-0.04	-0.02	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.83	-0.84	-0.85	-0.85	-0.86	-0.87	-0.88	-0.88	-0.90	-0.90	-0.91	-0.92
Off-road	0.00	0.00	0.00	0.00	0.00	-0.02	-0.05	-0.09	-0.12	-0.15	-0.18	-0.23	-0.25	-0.29	-0.23
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.56**	**-0.54**	**-0.13**	**-0.81**	**-0.76**	**-0.74**	**-0.78**	**-0.77**	**-0.85**	**-0.88**	**-0.91**	**-0.96**	**-0.98**	**-1.01**	**-0.97**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

San Bernardino County

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NOX - SBO (SCAB PORTION) - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.34	0.93	1.00	0.88	0.85	0.83	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
COGENERATION	0.19	0.15	0.15	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
OIL AND GAS PRODUCTION (COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	4.71	4.88	4.99	4.46	4.36	4.27	4.19	4.21	4.22	4.23	4.25	4.29	4.31	4.34	4.41
FOOD AND AGRICULTURAL PROCESSING	0.29	0.28	0.18	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.14	0.14
SERVICE AND COMMERCIAL	1.81	1.83	1.80	1.71	1.68	1.51	1.47	1.43	1.39	1.36	1.34	1.35	1.35	1.35	1.40
OTHER (FUEL COMBUSTION)	0.47	0.42	0.40	0.37	0.36	0.32	0.31	0.30	0.29	0.28	0.27	0.25	0.24	0.23	0.23
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.10
INCINERATORS	0.07	0.07	0.08	0.08	0.08	0.09	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.11
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.03	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
METAL PROCESSES	0.32	0.33	0.25	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**8.36**	**9.03**	**9.00**	**8.12**	**7.93**	**7.60**	**7.46**	**7.42**	**7.39**	**7.36**	**7.36**	**7.40**	**7.42**	**7.45**	**7.59**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	2.02	1.91	1.77	1.80	1.83	1.54	1.56	1.59	1.61	1.63	1.45	1.49	1.50	1.69	1.58
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**2.08**	**1.98**	**1.84**	**1.87**	**1.89**	**1.61**	**1.63**	**1.65**	**1.67**	**1.69**	**1.52**	**1.55**	**1.57**	**1.75**	**1.65**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	12.17	8.71	7.66	6.25	5.70	5.15	4.64	4.20	3.81	3.46	3.15	2.65	2.44	2.11	1.72
LIGHT DUTY TRUCKS - 1 (LDT1)	3.18	2.41	2.08	1.66	1.52	1.38	1.26	1.16	1.06	0.97	0.89	0.74	0.68	0.58	0.47
LIGHT DUTY TRUCKS - 2 (LDT2)	9.22	7.30	6.41	5.28	4.95	4.64	4.35	4.06	3.79	3.53	3.29	2.88	2.69	2.38	2.00
MEDIUM DUTY TRUCKS (MDV)	5.03	4.48	3.96	3.26	3.07	2.90	2.75	2.59	2.44	2.29	2.15	1.90	1.77	1.55	1.27
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.73	2.49	2.00	1.62	1.60	1.59	1.56	1.55	1.55	1.54	1.54	1.52	1.51	1.51	1.47
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.40	0.39	0.34	0.29	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.27
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.63	0.63	0.52	0.41	0.40	0.38	0.36	0.34	0.32	0.30	0.29	0.26	0.24	0.22	0.19
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.94	0.87	0.70	0.53	0.50	0.47	0.44	0.42	0.40	0.37	0.35	0.29	0.27	0.23	0.19
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.10	2.42	1.96	1.47	1.44	1.35	1.24	1.18	1.13	1.08	1.04	0.95	0.90	0.82	0.70
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	1.06	1.55	1.30	1.03	1.01	0.95	0.88	0.83	0.79	0.74	0.70	0.62	0.58	0.51	0.43
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	8.11	9.44	7.79	6.18	5.97	5.57	5.02	4.62	4.26	3.89	3.57	3.02	2.77	2.35	1.84
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	22.63	24.28	25.64	19.72	18.90	17.66	16.75	16.78	14.77	13.87	12.98	10.90	10.05	8.67	7.58
MOTORCYCLES (MCY)	0.18	0.40	0.39	0.37	0.37	0.36	0.36	0.37	0.38	0.38	0.39	0.40	0.41	0.42	0.42
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.41	0.27	0.27	0.27	0.27	0.28	0.27	0.25	0.25	0.25	0.25	0.25	0.25	0.22	0.21
HEAVY DUTY GAS URBAN BUSES (UB)	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
SCHOOL BUSES (SB)	0.52	0.55	0.56	0.59	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.69	0.70	0.71	0.72
OTHER BUSES (OB)	0.25	0.26	0.25	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.15	0.13	0.12	0.11	0.09
MOTOR HOMES (MH)	0.48	0.45	0.43	0.40	0.38	0.36	0.34	0.31	0.29	0.27	0.26	0.22	0.21	0.18	0.15
On-Road Subtotal	**68.10**	**66.95**	**62.31**	**49.67**	**47.29**	**44.26**	**41.44**	**39.89**	**36.45**	**34.15**	**32.04**	**27.78**	**25.96**	**22.94**	**19.80**
Other Mobile															
AIRCRAFT	1.25	1.90	2.12	2.55	2.77	2.98	3.59	4.20	4.81	5.42	6.04	7.26	7.87	9.09	11.48
TRAINS	7.59	6.47	6.14	5.82	5.71	3.91	4.15	4.28	4.36	4.44	4.53	4.72	4.81	5.02	5.37
RECREATIONAL BOATS	2.04	2.70	2.89	3.00	2.99	2.99	2.99	3.01	3.03	3.05	3.08	3.16	3.20	3.27	3.35
OFF-ROAD RECREATIONAL VEHICLES	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06
OFF-ROAD EQUIPMENT	20.69	19.41	18.86	17.41	16.72	16.09	15.39	14.71	13.99	13.27	12.45	11.01	10.37	9.27	8.09
FARM EQUIPMENT	2.20	1.97	1.90	1.71	1.62	1.53	1.45	1.34	1.24	1.15	1.07	0.90	0.82	0.68	0.52
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**33.81**	**32.48**	**31.94**	**30.52**	**29.85**	**27.54**	**27.61**	**27.58**	**27.48**	**27.38**	**27.21**	**27.09**	**27.12**	**27.39**	**28.86**
Grand Total	**112.34**	**110.44**	**105.09**	**90.17**	**86.97**	**81.01**	**78.14**	**76.55**	**72.99**	**70.59**	**68.14**	**63.83**	**62.07**	**59.54**	**57.90**

NOX - SAN BERNARDINO (SCAB PORTION)															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-7.19	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.08	-1.04	-1.24	-1.12	-1.02	-0.93	-0.85	-0.76	-0.68	-0.61	-0.53	-0.36	-0.28	-0.17	-0.08
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	0.00
Idling	0.00	-0.16	-0.42	-0.82	-0.86	-0.89	-0.95	0.00	-1.06	-1.13	-1.20	-1.26	-1.29	-1.35	-1.50
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01
Moyer	-0.14	-0.19	-0.16	-0.10	-0.13	-0.16	-0.19	-0.19	-0.19	-0.19	-0.17	-0.13	-0.09	0.00	0.00
Off-road	0.00	0.00	0.00	-0.01	-0.01	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02
Ships	0.00	0.00	0.00	-0.07	-0.07	-0.07	-0.08	-0.08	-0.08	-0.08	-0.09	-0.09	-0.09	-0.10	-0.10
Summary	**-0.22**	**-8.59**	**-1.83**	**-2.14**	**-2.12**	**-2.11**	**-2.11**	**-1.08**	**-2.07**	**-2.06**	**-2.03**	**-1.89**	**-1.81**	**-1.66**	**-1.72**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - SBO (SCAB PORTION) - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
COGENERATION	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OIL AND GAS PRODUCTION (COMBUSTION)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.44	0.49	0.52	0.56	0.59	0.61	0.63	0.64	0.66	0.68	0.69	0.72	0.73	0.75	0.79
FOOD AND AGRICULTURAL PROCESSING	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SERVICE AND COMMERCIAL	0.10	0.11	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.15	0.16	0.17
OTHER (FUEL COMBUSTION)	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05
SEWAGE TREATMENT	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
LANDFILLS	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
INCINERATORS	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
OTHER (WASTE DISPOSAL)	3.72	4.04	4.13	3.78	3.59	3.64	3.69	3.74	3.79	3.84	3.89	3.99	4.05	4.15	4.30
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	1.17	0.57	0.61	0.69	0.73	0.77	0.80	0.82	0.85	0.88	0.90	0.94	0.96	1.00	1.07
COATINGS AND RELATED PROCESS SOLVENTS	3.27	3.43	3.44	3.18	3.32	3.45	3.56	3.66	3.77	3.87	3.98	4.15	4.23	4.40	4.69
PRINTING	0.37	0.39	0.31	0.34	0.36	0.37	0.38	0.39	0.40	0.41	0.43	0.44	0.45	0.46	0.49
ADHESIVES AND SEALANTS	0.68	0.67	0.73	0.83	0.88	0.93	0.97	1.00	1.03	1.06	1.09	1.14	1.17	1.22	1.31
OTHER (CLEANING AND SURFACE COATINGS)	0.12	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.09	0.09
OIL AND GAS PRODUCTION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	2.53	2.60	2.64	2.65	2.67	2.72	2.77	2.82	2.86	2.91	2.95	3.05	3.10	3.20	3.34
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	1.28	1.31	1.43	1.62	1.73	1.85	1.92	2.00	2.07	2.15	2.22	2.35	2.42	2.55	2.77
FOOD AND AGRICULTURE	0.19	0.21	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.27	0.28	0.28	0.29	0.30	0.31
MINERAL PROCESSES	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.73	0.80	0.82	0.83	0.84	0.85	0.87	0.88	0.90	0.91	0.93	0.95	0.97	0.99	1.04
Stationary Subtotal	**14.98**	**15.04**	**15.36**	**15.26**	**15.49**	**16.01**	**16.38**	**16.77**	**17.16**	**17.55**	**17.94**	**18.61**	**18.95**	**19.62**	**20.72**
Area-Wide															
CONSUMER PRODUCTS	10.29	9.64	9.72	9.53	9.67	9.79	9.92	10.04	10.16	10.29	10.41	10.67	10.80	11.05	11.43
ARCHITECTURAL COATINGS AND RELATED PROCESS S	5.29	4.31	2.91	2.57	2.61	2.66	2.71	2.77	2.82	2.87	2.93	3.04	3.10	3.21	3.38
PESTICIDES/FERTILIZERS	0.09	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
ASPHALT PAVING / ROOFING	0.18	0.22	0.23	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.36	0.39
RESIDENTIAL FUEL COMBUSTION	0.27	0.27	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.31	0.31	0.32	0.32	0.36	0.34
FARMING OPERATIONS	4.55	3.30	2.68	2.27	2.17	1.79	1.70	1.62	1.55	1.48	1.42	1.31	1.27	1.19	1.10
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
MANAGED BURNING AND DISPOSAL	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
COOKING	0.17	0.18	0.19	0.20	0.21	0.22	0.22	0.23	0.23	0.24	0.25	0.25	0.26	0.27	0.29
Area-Wide Subtotal	**21.00**	**18.21**	**16.29**	**15.39**	**15.49**	**15.30**	**15.41**	**15.52**	**15.65**	**15.78**	**15.91**	**16.21**	**16.37**	**16.72**	**17.20**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	15.50	12.25	10.78	8.75	8.02	7.26	6.61	6.06	5.56	5.13	4.77	4.19	3.93	3.54	3.07
LIGHT DUTY TRUCKS - 1 (LDT1)	3.53	2.91	2.52	2.00	1.81	1.64	1.53	1.43	1.33	1.24	1.16	1.01	0.95	0.88	0.79
LIGHT DUTY TRUCKS - 2 (LDT2)	6.16	5.51	4.95	4.29	4.16	4.04	3.92	3.80	3.67	3.55	3.44	3.25	3.16	3.02	2.86
MEDIUM DUTY TRUCKS (MDV)	3.24	3.03	2.72	2.36	2.29	2.24	2.20	2.16	2.11	2.07	2.02	1.94	1.90	1.80	1.67
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.71	1.59	1.23	0.88	0.84	0.81	0.79	0.77	0.75	0.75	0.74	0.72	0.71	0.70	0.66
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.29	0.28	0.22	0.17	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.12	0.12	0.11	0.11
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.72	0.61	0.48	0.33	0.30	0.28	0.25	0.23	0.21	0.19	0.17	0.15	0.13	0.12	0.11
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.40	0.38	0.30	0.21	0.20	0.18	0.17	0.16	0.15	0.14	0.13	0.10	0.09	0.07	0.05
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.10	0.13	0.12	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.73	2.44	2.03	1.61	1.54	1.45	1.41	1.35	1.28	1.22	1.16	1.02	0.95	0.84	0.77
MOTORCYCLES (MCY)	1.09	1.95	1.79	1.63	1.59	1.55	1.54	1.55	1.57	1.57	1.59	1.65	1.67	1.73	1.71
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.03
SCHOOL BUSES (SB)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER BUSES (OB)	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02
MOTOR HOMES (MH)	0.12	0.09	0.09	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.02	0.02	0.01
On-Road Subtotal	**34.74**	**31.39**	**27.42**	**22.57**	**21.25**	**19.95**	**18.90**	**17.97**	**17.08**	**16.30**	**15.61**	**14.43**	**13.89**	**13.07**	**12.05**
Other Mobile															
AIRCRAFT	1.01	1.51	1.67	2.00	2.16	2.33	2.57	2.82	3.07	3.32	3.57	4.06	4.31	4.81	5.77
TRAINS	0.51	0.51	0.50	0.50	0.49	0.49	0.49	0.49	0.50	0.50	0.50	0.51	0.51	0.52	0.53
RECREATIONAL BOATS	14.43	13.66	13.27	12.38	11.87	11.44	11.07	10.80	10.57	10.37	10.22	9.98	9.93	9.83	9.84
OFF-ROAD RECREATIONAL VEHICLES	1.71	2.41	2.42	2.50	2.54	2.58	2.63	2.70	2.76	2.84	2.93	3.12	3.23	3.45	3.83
OFF-ROAD EQUIPMENT	9.38	9.95	9.36	8.54	8.17	7.82	7.49	7.18	6.89	6.63	6.40	6.03	5.91	5.76	5.77
FARM EQUIPMENT	0.46	0.43	0.41	0.37	0.35	0.33	0.31	0.29	0.26	0.24	0.22	0.18	0.17	0.14	0.12
FUEL STORAGE AND HANDLING	2.17	2.14	2.06	1.51	1.40	1.30	1.22	1.15	1.09	1.03	0.98	0.91	0.88	0.82	0.76
Other Mobile Subtotal	**29.67**	**30.60**	**29.69**	**27.79**	**26.98**	**26.29**	**25.80**	**25.43**	**25.14**	**24.93**	**24.82**	**24.79**	**24.93**	**25.33**	**26.62**
Grand Total	**100.39**	**95.25**	**88.77**	**81.02**	**79.21**	**77.55**	**76.49**	**75.69**	**75.03**	**74.56**	**74.28**	**74.05**	**74.13**	**74.75**	**76.59**

ROG - SAN BERNARDINO (SCAB PORTION)															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.69	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.03	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.04	-0.05	-0.06	-0.08	-0.10	-0.12	-0.16
Moyer	0.00	0.00	-0.04	-0.10	-0.15	-0.19	-0.23	-0.23	-0.22	-0.22	-0.20	-0.15	-0.09	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.41	-0.42	-0.43	-0.43	-0.44	-0.44	-0.45	-0.45	-0.46	-0.47	-0.48	-0.50
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.03**	**-0.71**	**-0.06**	**-0.54**	**-0.59**	**-0.64**	**-0.69**	**-0.68**	**-0.72**	**-0.73**	**-0.72**	**-0.71**	**-0.66**	**-0.61**	**-0.66**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Riverside County

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NOX - RIVERSIDE (SCAB PORTION) - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.58	0.47	0.51	0.57	0.49	0.45	0.45	0.46	0.46	0.46	0.47	0.48	0.49	0.51	0.51
COGENERATION	0.02	0.03	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
MANUFACTURING AND INDUSTRIAL	1.33	1.47	1.50	1.48	1.48	1.46	1.44	1.45	1.46	1.48	1.50	1.53	1.54	1.56	1.61
FOOD AND AGRICULTURAL PROCESSING	0.84	0.70	0.37	0.34	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.24	0.23	0.22	0.20
SERVICE AND COMMERCIAL	1.26	1.36	1.32	1.24	1.21	1.14	1.10	1.06	1.02	0.98	0.96	0.96	0.96	0.95	0.98
OTHER (FUEL COMBUSTION)	0.70	0.65	0.63	0.58	0.55	0.52	0.50	0.48	0.47	0.45	0.43	0.40	0.38	0.36	0.36
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
INCINERATORS	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MINERAL PROCESSES	0.05	0.07	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08
METAL PROCESSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationary Subtotal	**4.89**	**4.85**	**4.55**	**4.41**	**4.27**	**4.09**	**4.00**	**3.95**	**3.90**	**3.86**	**3.84**	**3.84**	**3.83**	**3.83**	**3.90**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	1.76	1.68	1.55	1.61	1.64	1.40	1.43	1.46	1.49	1.52	1.37	1.42	1.44	1.49	1.57
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MANAGED BURNING AND DISPOSAL	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**1.80**	**1.72**	**1.59**	**1.65**	**1.68**	**1.43**	**1.47**	**1.49**	**1.53**	**1.56**	**1.40**	**1.46**	**1.48**	**1.53**	**1.61**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	13.28	9.83	8.85	7.43	6.82	6.21	5.61	5.10	4.63	4.22	3.86	3.27	3.02	2.63	2.17
LIGHT DUTY TRUCKS - 1 (LDT1)	4.46	3.45	3.09	2.57	2.35	2.15	1.97	1.81	1.67	1.53	1.41	1.18	1.09	0.93	0.76
LIGHT DUTY TRUCKS - 2 (LDT2)	11.10	9.18	8.23	6.93	6.51	6.11	5.73	5.37	5.02	4.70	4.40	3.88	3.64	3.24	2.76
MEDIUM DUTY TRUCKS (MDV)	5.78	5.57	5.01	4.18	3.94	3.72	3.53	3.34	3.15	2.98	2.81	2.49	2.34	2.07	1.73
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.53	2.38	1.84	1.44	1.41	1.39	1.36	1.34	1.33	1.33	1.33	1.34	1.35	1.37	1.36
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.32	0.35	0.29	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.67	0.59	0.48	0.37	0.36	0.34	0.32	0.30	0.29	0.27	0.25	0.22	0.21	0.19	0.16
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.05	1.06	0.84	0.63	0.60	0.56	0.53	0.51	0.48	0.45	0.42	0.35	0.32	0.28	0.23
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.09	3.37	2.54	1.66	1.58	1.41	1.25	1.15	1.07	1.01	0.96	0.86	0.82	0.75	0.63
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	1.31	2.11	1.67	1.19	1.15	1.07	0.98	0.92	0.87	0.81	0.76	0.66	0.62	0.55	0.44
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	6.64	8.01	6.47	4.89	4.71	4.40	3.92	3.62	3.33	3.05	2.80	2.29	2.11	1.79	1.40
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	24.75	26.46	27.32	20.57	19.78	18.54	17.59	17.68	15.61	14.64	13.67	11.53	10.66	9.28	8.22
MOTORCYCLES (MCY)	0.31	0.79	0.79	0.77	0.76	0.76	0.76	0.77	0.79	0.80	0.82	0.84	0.85	0.88	0.84
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.25	0.22	0.21	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	0.18	0.18
HEAVY DUTY GAS URBAN BUSES (UB)	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10
SCHOOL BUSES (SB)	0.59	0.57	0.57	0.54	0.54	0.53	0.52	0.51	0.51	0.51	0.50	0.50	0.50	0.49	0.48
OTHER BUSES (OB)	0.33	0.31	0.30	0.29	0.29	0.28	0.26	0.25	0.24	0.22	0.21	0.18	0.17	0.14	0.11
MOTOR HOMES (MH)	0.68	0.66	0.64	0.58	0.55	0.52	0.48	0.45	0.43	0.40	0.37	0.32	0.30	0.27	0.22
On-Road Subtotal	**74.23**	**75.00**	**69.23**	**54.59**	**51.89**	**48.55**	**45.38**	**43.67**	**39.96**	**37.47**	**35.14**	**30.48**	**28.55**	**25.40**	**22.06**
Other Mobile															
AIRCRAFT	0.24	0.24	0.24	0.24	0.24	0.34	0.38	0.43	0.48	0.53	0.58	0.68	0.72	0.82	1.13
TRAINS	4.77	4.01	3.79	3.59	3.54	2.46	2.64	2.74	2.80	2.86	2.92	3.06	3.13	3.28	3.53
RECREATIONAL BOATS	0.94	1.20	1.27	1.34	1.33	1.32	1.32	1.32	1.33	1.33	1.34	1.36	1.37	1.38	1.39
OFF-ROAD RECREATIONAL VEHICLES	0.07	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06
OFF-ROAD EQUIPMENT	17.55	16.62	16.22	15.03	14.43	13.68	13.09	12.51	11.91	11.29	10.59	9.31	8.74	7.76	6.69
FARM EQUIPMENT	4.53	4.06	3.91	3.52	3.36	3.14	2.97	2.75	2.54	2.36	2.19	1.85	1.69	1.42	1.08
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**23.09**	**21.94**	**21.45**	**19.93**	**19.16**	**18.18**	**17.42**	**16.63**	**15.82**	**15.03**	**14.16**	**12.56**	**11.84**	**10.61**	**9.22**
Grand Total	**104.01**	**103.50**	**96.82**	**80.58**	**77.01**	**72.25**	**68.26**	**65.75**	**61.22**	**57.92**	**54.53**	**48.33**	**45.71**	**41.37**	**36.78**

NOX - RIVERSIDE (SCAB PORTION)															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-7.84	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.09	-1.12	-1.31	-1.16	-1.06	-0.96	-0.88	-0.79	-0.71	-0.63	-0.55	-0.37	-0.30	-0.18	-0.08
Public Fleet	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	0.00
Idling	0.00	-0.18	-0.45	-0.86	-0.90	-0.94	-0.99	0.00	-1.12	-1.19	-1.26	-1.34	-1.37	-1.44	-1.63
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01
Moyer	-0.16	-0.23	-0.19	-0.12	-0.16	-0.19	-0.22	-0.22	-0.22	-0.23	-0.20	-0.16	-0.11	0.00	0.00
Off-road	0.00	-0.01	-0.01	-0.05	-0.07	-0.39	-0.39	-0.40	-0.40	-0.39	-0.38	-0.36	-0.36	-0.35	-0.36
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.25**	**-9.36**	**-1.96**	**-2.20**	**-2.21**	**-2.50**	**-2.51**	**-1.44**	**-2.49**	**-2.47**	**-2.42**	**-2.25**	**-2.16**	**-2.00**	**-2.09**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - RIVERSIDE (SCAB PORTION) - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
COGENERATION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANUFACTURING AND INDUSTRIAL	0.16	0.17	0.18	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.25	0.25	0.27
FOOD AND AGRICULTURAL PROCESSING	0.06	0.05	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
SERVICE AND COMMERCIAL	0.11	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	0.16	0.17	0.17	0.18	0.19
OTHER (FUEL COMBUSTION)	0.08	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03
SEWAGE TREATMENT	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.09
LANDFILLS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INCINERATORS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
OTHER (WASTE DISPOSAL)	0.28	0.31	0.32	0.32	0.31	0.32	0.33	0.34	0.34	0.35	0.36	0.37	0.38	0.39	0.42
LAUNDERING	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
DEGREASING	0.84	0.41	0.43	0.50	0.53	0.56	0.58	0.60	0.63	0.65	0.67	0.70	0.71	0.74	0.78
COATINGS AND RELATED PROCESS SOLVENTS	2.75	2.87	2.84	2.72	2.86	2.98	3.10	3.22	3.34	3.46	3.57	3.73	3.81	3.96	4.22
PRINTING	0.36	0.47	0.41	0.44	0.46	0.48	0.50	0.52	0.54	0.55	0.57	0.59	0.60	0.61	0.64
ADHESIVES AND SEALANTS	0.43	0.44	0.48	0.54	0.58	0.61	0.64	0.66	0.69	0.71	0.74	0.76	0.78	0.80	0.85
OTHER (CLEANING AND SURFACE COATINGS)	0.10	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08
PETROLEUM REFINING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PETROLEUM MARKETING	2.10	2.21	2.24	2.32	2.35	2.41	2.45	2.50	2.54	2.58	2.62	2.71	2.76	2.85	2.99
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	1.26	1.29	1.41	1.64	1.76	1.88	1.97	2.06	2.15	2.24	2.33	2.45	2.51	2.63	2.84
FOOD AND AGRICULTURE	0.35	0.37	0.38	0.41	0.42	0.43	0.44	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.54
MINERAL PROCESSES	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
METAL PROCESSES	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.56	0.65	0.67	0.72	0.74	0.76	0.78	0.79	0.81	0.83	0.85	0.88	0.90	0.94	0.99
Stationary Subtotal	**9.56**	**9.60**	**9.77**	**10.22**	**10.63**	**11.06**	**11.43**	**11.80**	**12.17**	**12.53**	**12.90**	**13.41**	**13.67**	**14.18**	**15.04**
Area-Wide															
CONSUMER PRODUCTS	9.38	9.24	9.47	9.52	9.77	10.00	10.23	10.46	10.69	10.91	11.14	11.59	11.81	12.25	12.90
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	4.89	4.27	2.94	2.67	2.75	2.82	2.91	3.00	3.09	3.18	3.27	3.45	3.54	3.72	3.99
PESTICIDES/FERTILIZERS	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
ASPHALT PAVING / ROOFING	0.15	0.19	0.20	0.22	0.24	0.25	0.26	0.28	0.29	0.30	0.31	0.33	0.34	0.36	0.40
RESIDENTIAL FUEL COMBUSTION	0.15	0.15	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.22
FARMING OPERATIONS	5.06	3.99	3.46	3.11	3.03	2.70	2.62	2.55	2.49	2.44	2.38	2.30	2.26	2.19	2.11
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MANAGED BURNING AND DISPOSAL	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
COOKING	0.15	0.17	0.17	0.19	0.20	0.20	0.21	0.22	0.23	0.24	0.24	0.26	0.26	0.28	0.30
Area-Wide Subtotal	**20.03**	**18.29**	**16.69**	**16.18**	**16.44**	**16.44**	**16.71**	**16.98**	**17.26**	**17.55**	**17.84**	**18.41**	**18.71**	**19.30**	**20.21**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	14.99	12.09	10.77	8.94	8.23	7.50	6.82	6.25	5.73	5.29	4.91	4.31	4.04	3.63	3.18
LIGHT DUTY TRUCKS - 1 (LDT1)	4.06	3.37	3.00	2.48	2.25	2.04	1.89	1.76	1.64	1.52	1.42	1.24	1.15	1.06	0.96
LIGHT DUTY TRUCKS - 2 (LDT2)	6.38	5.71	5.17	4.52	4.37	4.24	4.10	3.97	3.83	3.71	3.59	3.39	3.30	3.16	3.05
MEDIUM DUTY TRUCKS (MDV)	3.23	3.12	2.83	2.47	2.40	2.34	2.31	2.27	2.22	2.18	2.14	2.07	2.02	1.93	1.82
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.74	1.71	1.24	0.80	0.74	0.70	0.66	0.63	0.61	0.60	0.59	0.60	0.61	0.62	0.61
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.26	0.28	0.22	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.13	0.12	0.12	0.12	0.11
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.68	0.56	0.44	0.31	0.28	0.26	0.23	0.21	0.19	0.17	0.15	0.13	0.12	0.10	0.09
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.41	0.38	0.30	0.23	0.22	0.20	0.20	0.18	0.17	0.16	0.15	0.13	0.11	0.09	0.07
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.00	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.02	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.08	0.12	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.81	1.99	2.07	1.61	1.54	1.46	1.40	1.35	1.29	1.24	1.18	1.05	0.98	0.89	0.83
MOTORCYCLES (MCY)	1.61	3.36	3.19	2.94	2.89	2.85	2.81	2.83	2.86	2.89	2.95	2.99	3.04	3.14	3.01
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HEAVY DUTY GAS URBAN BUSES (UB)	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
SCHOOL BUSES (SB)	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER BUSES (OB)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03
MOTOR HOMES (MH)	0.15	0.12	0.11	0.09	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.02
On-Road Subtotal	**35.57**	**33.07**	**29.65**	**24.83**	**23.43**	**22.09**	**20.92**	**19.92**	**18.98**	**18.20**	**17.51**	**16.31**	**15.77**	**15.01**	**13.96**
Other Mobile															
AIRCRAFT	0.54	0.55	0.55	0.55	0.55	0.56	0.58	0.59	0.61	0.62	0.64	0.67	0.68	0.71	0.79
TRAINS	0.32	0.33	0.32	0.32	0.31	0.31	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.35
RECREATIONAL BOATS	5.02	5.46	5.40	5.27	5.18	5.12	5.07	5.05	5.04	5.04	5.04	5.09	5.13	5.22	5.46
OFF-ROAD RECREATIONAL VEHICLES	1.88	2.24	2.14	2.10	2.10	2.13	2.16	2.21	2.26	2.32	2.38	2.53	2.62	2.80	3.10
OFF-ROAD EQUIPMENT	8.45	9.25	8.77	8.17	7.89	7.61	7.36	7.12	6.89	6.68	6.51	6.26	6.20	6.15	6.31
FARM EQUIPMENT	0.95	0.88	0.84	0.75	0.72	0.69	0.65	0.59	0.54	0.49	0.45	0.38	0.34	0.29	0.24
FUEL STORAGE AND HANDLING	2.00	2.08	1.98	1.49	1.39	1.31	1.24	1.18	1.12	1.08	1.04	0.97	0.95	0.90	0.85
Other Mobile Subtotal	**19.17**	**20.77**	**20.01**	**18.64**	**18.14**	**17.73**	**17.38**	**17.06**	**16.78**	**16.56**	**16.39**	**16.23**	**16.25**	**16.42**	**17.10**
Grand Total	**84.33**	**81.74**	**76.11**	**69.86**	**68.64**	**67.33**	**66.44**	**65.77**	**65.20**	**64.84**	**64.65**	**64.37**	**64.39**	**64.91**	**66.31**

ROG - RIVERSIDE (SCAB PORTION)															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-0.56	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.10	0.01	0.01	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.04	-0.05	-0.06	-0.09	-0.10	-0.13	-0.17
Moyer	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	0.00	0.00
Consumer Products	0.00	0.00	0.00	-0.41	-0.43	-0.44	-0.45	-0.46	-0.47	-0.48	-0.49	-0.50	-0.51	-0.53	-0.56
Off-road	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.10**	**-0.55**	**0.01**	**-0.41**	**-0.42**	**-0.44**	**-0.46**	**-0.45**	**-0.50**	**-0.52**	**-0.53**	**-0.56**	**-0.58**	**-0.61**	**-0.66**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Los Angeles County

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NOX - LA WHOLE COUNTY - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	**2002**	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
Stationary															
ELECTRIC UTILITIES	3.87	6.78	6.70	5.96	5.77	5.29	4.95	4.95	4.95	4.96	4.96	4.97	4.97	4.98	4.98
COGENERATION	0.36	0.41	0.35	0.30	0.29	0.29	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
OIL AND GAS PRODUCTION (COMBUSTION)	0.63	0.48	0.48	0.43	0.42	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
PETROLEUM REFINING (COMBUSTION)	7.07	7.09	7.07	6.11	5.89	5.78	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73	5.73
MANUFACTURING AND INDUSTRIAL	10.22	10.30	9.69	9.27	9.15	8.87	8.75	8.68	8.61	8.54	8.51	8.55	8.56	8.59	8.70
FOOD AND AGRICULTURAL PROCESSING	0.75	0.68	0.52	0.51	0.50	0.48	0.47	0.47	0.46	0.46	0.45	0.44	0.44	0.44	0.43
SERVICE AND COMMERCIAL	11.06	11.03	10.57	9.83	9.53	8.89	8.61	8.24	7.90	7.57	7.38	7.21	7.13	6.96	6.91
OTHER (FUEL COMBUSTION)	5.80	5.20	5.00	4.57	4.38	4.15	4.03	3.91	3.78	3.66	3.54	3.36	3.27	3.10	3.11
SEWAGE TREATMENT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LANDFILLS	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.42
INCINERATORS	1.28	1.29	1.28	1.26	1.25	1.25	1.23	1.23	1.23	1.23	1.23	1.23	1.24	1.25	1.26
OTHER (WASTE DISPOSAL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LAUNDERING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DEGREASING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
PRINTING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADHESIVES AND SEALANTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.11	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14
OIL AND GAS PRODUCTION	0.03	0.06	0.09	0.08	0.08	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PETROLEUM REFINING	4.86	4.98	5.11	4.52	4.37	4.36	4.38	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19
PETROLEUM MARKETING	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
OTHER (PETROLEUM PRODUCTION AND MARKETI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CHEMICAL	0.09	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
FOOD AND AGRICULTURE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MINERAL PROCESSES	1.25	0.94	0.84	0.82	0.82	0.83	0.83	0.84	0.84	0.84	0.85	0.85	0.86	0.87	0.88
METAL PROCESSES	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
WOOD AND PAPER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GLASS AND RELATED PRODUCTS	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ELECTRONICS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.90	0.95	1.04	1.04	1.03	1.03	1.02	1.03	1.03	1.04	1.04	1.05	1.05	1.06	1.08
Stationary Subtotal	**48.75**	**50.84**	**49.40**	**45.37**	**44.16**	**42.32**	**41.41**	**40.66**	**40.13**	**39.63**	**39.28**	**39.02**	**38.87**	**38.59**	**38.71**
Area-Wide															
CONSUMER PRODUCTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARCHITECTURAL COATINGS AND RELATED PROCI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PESTICIDES/FERTILIZERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASPHALT PAVING / ROOFING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL FUEL COMBUSTION	12.88	12.21	11.31	11.28	11.32	9.47	9.50	9.54	9.57	9.61	8.51	8.54	8.54	8.54	8.59
FARMING OPERATIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MANAGED BURNING AND DISPOSAL	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.19	0.20
COOKING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area-Wide Subtotal	**13.07**	**12.40**	**11.50**	**11.48**	**11.52**	**9.67**	**9.71**	**9.75**	**9.79**	**9.82**	**8.73**	**8.77**	**8.77**	**8.77**	**8.84**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	91.91	62.77	53.03	40.49	36.51	32.95	29.88	27.10	24.63	22.41	20.45	17.16	15.76	13.49	10.76
LIGHT DUTY TRUCKS - 1 (LDT1)	16.39	12.01	10.41	8.28	7.55	6.86	6.30	5.78	5.30	4.84	4.41	3.66	3.32	2.84	2.27
LIGHT DUTY TRUCKS - 2 (LDT2)	57.27	45.91	39.39	30.93	28.34	26.09	24.41	22.91	21.48	20.12	18.81	16.48	15.42	13.58	11.37
MEDIUM DUTY TRUCKS (MDV)	29.88	25.58	22.42	18.03	16.67	15.47	14.58	13.69	12.84	12.03	11.25	9.81	9.14	7.92	6.37
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	16.69	14.50	12.13	9.90	9.55	9.24	8.97	8.74	8.51	8.30	8.10	7.65	7.45	7.10	6.61
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	2.52	2.54	2.21	1.90	1.86	1.81	1.76	1.72	1.68	1.64	1.60	1.50	1.46	1.37	1.27
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	5.01	4.78	4.07	3.33	3.19	3.04	2.89	2.73	2.57	2.41	2.26	1.95	1.81	1.57	1.27
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	5.64	5.70	4.88	3.99	3.78	3.54	3.27	3.00	2.72	2.48	2.25	1.83	1.65	1.35	1.02
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.35	5.78	5.17	4.35	4.32	4.08	3.89	3.72	3.58	3.45	3.33	3.09	2.95	2.71	2.37
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	4.54	5.71	5.00	4.15	4.04	3.78	3.55	3.34	3.15	2.97	2.80	2.51	2.35	2.07	1.73
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	43.48	46.24	39.39	31.70	30.14	27.96	25.78	23.73	21.78	19.91	18.22	15.59	14.22	11.89	9.32
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	92.95	100.36	111.21	90.26	87.33	82.51	76.83	71.00	65.19	59.87	54.80	45.71	41.99	35.87	29.84
MOTORCYCLES (MCY)	0.86	1.45	1.44	1.40	1.39	1.38	1.38	1.39	1.40	1.41	1.42	1.42	1.43	1.45	1.49
HEAVY DUTY DIESEL URBAN BUSES (UB)	10.45	9.40	9.10	8.87	8.74	8.65	8.60	8.51	8.18	8.07	7.94	7.53	7.14	6.65	6.51
HEAVY DUTY GAS URBAN BUSES (UB)	0.55	0.42	0.43	0.43	0.43	0.43	0.43	0.44	0.46	0.47	0.47	0.48	0.50	0.51	0.52
SCHOOL BUSES (SB)	2.63	2.47	2.47	2.45	2.44	2.42	2.41	2.39	2.36	2.34	2.31	2.27	2.25	2.19	2.10
OTHER BUSES (OB)	2.38	2.73	2.64	2.26	2.10	1.87	1.68	1.53	1.40	1.28	1.19	1.06	1.00	0.88	0.73
MOTOR HOMES (MH)	1.99	1.70	1.62	1.44	1.36	1.26	1.17	1.09	1.01	0.93	0.86	0.75	0.69	0.59	0.48
On-Road Subtotal	**385.50**	**350.05**	**327.00**	**264.15**	**249.75**	**233.35**	**217.79**	**202.81**	**188.23**	**174.93**	**162.47**	**140.46**	**130.52**	**114.02**	**96.03**
Other Mobile															
AIRCRAFT	11.03	12.41	12.88	13.81	14.27	14.74	14.88	15.03	15.16	15.31	15.44	15.72	15.85	16.13	16.23
TRAINS	22.83	19.43	18.43	17.48	17.19	11.96	12.72	13.14	13.39	13.66	13.94	14.52	14.83	15.49	16.58
SHIPS AND COMMERCIAL BOATS	60.15	68.53	70.03	72.85	74.57	76.31	77.29	78.32	79.75	81.28	82.84	87.09	89.29	94.01	103.05
RECREATIONAL BOATS	5.05	6.64	7.10	7.52	7.51	7.52	7.53	7.57	7.61	7.68	7.75	7.93	8.02	8.17	8.36
OFF-ROAD RECREATIONAL VEHICLES	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10	0.11
OFF-ROAD EQUIPMENT	157.48	142.23	137.38	122.75	115.62	108.21	102.61	96.62	90.49	84.98	79.13	69.91	65.73	58.50	50.85
FARM EQUIPMENT	2.52	2.26	2.17	1.96	1.87	1.79	1.70	1.58	1.46	1.36	1.25	1.06	0.97	0.81	0.62
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Mobile Subtotal	**259.14**	**251.59**	**248.08**	**236.45**	**231.11**	**220.60**	**216.81**	**212.33**	**207.95**	**204.34**	**200.45**	**196.33**	**194.80**	**193.21**	**195.80**
Grand Total	**706.46**	**664.89**	**635.98**	**557.45**	**536.54**	**505.95**	**485.71**	**465.55**	**446.10**	**428.72**	**410.92**	**384.58**	**372.95**	**354.60**	**339.38**

NOX - LA WHOLE COUNTY															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-29.68	0	0	0	0	0	0	0	0	0	0	0	0	0
Reflash	-0.33	-4.25	-5.19	-5.08	-4.70	-4.29	-3.86	-3.42	-3.02	-2.61	-2.24	-1.51	-1.21	-0.74	-0.33
Public Fleet	0.00	0.00	-0.01	-0.05	-0.07	-0.09	-0.08	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.03	-0.01
Idling	0.00	-0.77	-2.13	-4.40	-4.62	-4.86	-5.06	-5.25	-5.43	-5.63	-5.82	-6.09	-6.22	-6.45	-6.81
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.04	-0.05
Moyer	-0.81	-1.04	-0.88	-0.53	-0.67	-0.81	-0.94	-0.93	-0.93	-0.92	-0.82	-0.62	-0.44	0.00	0.00
Off-road	0.00	-0.31	-0.46	-1.65	-2.74	-5.03	-5.03	-5.17	-5.27	-4.92	-4.57	-4.00	-3.79	-3.45	-2.78
Ships	0.00	0.00	0.00	-0.33	-0.35	-0.38	-0.41	-0.43	-0.46	-0.50	-0.53	-0.62	-0.66	-0.77	-0.97
Summary	**-1.15**	**-36.05**	**-8.67**	**-12.05**	**-13.15**	**-15.46**	**-15.37**	**-15.30**	**-15.19**	**-14.67**	**-14.05**	**-12.91**	**-12.39**	**-11.47**	**-10.94**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

ROG - LA WHOLE COUNTY - SUMMER PLANNING INVENTORY -- ADJUSTED FOR MEASURES AND CATEGORIES THROUGH 31 DEC 2006															
SUBCATEGORY	2002	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2020	2023
Stationary															
ELECTRIC UTILITIES	1.59	1.24	1.36	1.55	1.34	1.22	1.22	1.24	1.25	1.26	1.28	1.32	1.35	1.40	1.40
COGENERATION	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
OIL AND GAS PRODUCTION (COMBUSTION)	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
PETROLEUM REFINING (COMBUSTION)	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
MANUFACTURING AND INDUSTRIAL	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
FOOD AND AGRICULTURAL PROCESSING	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SERVICE AND COMMERCIAL	0.77	0.78	0.79	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81	0.81	0.80	0.81
OTHER (FUEL COMBUSTION)	0.58	0.52	0.50	0.45	0.42	0.40	0.38	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.24
SEWAGE TREATMENT	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17
LANDFILLS	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09
INCINERATORS	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
OTHER (WASTE DISPOSAL)	0.72	0.73	0.73	0.69	0.66	0.67	0.67	0.67	0.68	0.68	0.68	0.69	0.70	0.71	0.73
LAUNDERING	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17
DEGREASING	14.94	7.66	7.69	7.84	7.96	8.07	8.11	8.14	8.18	8.22	8.25	8.40	8.48	8.63	8.87
COATINGS AND RELATED PROCESS SOLVENTS	18.24	16.54	15.95	13.76	13.92	13.99	14.07	14.16	14.24	14.32	14.40	14.63	14.75	14.98	15.35
PRINTING	4.09	3.98	2.83	2.85	2.86	2.87	2.87	2.88	2.88	2.89	2.89	2.94	2.97	3.02	3.11
ADHESIVES AND SEALANTS	1.36	1.17	1.18	1.22	1.24	1.25	1.25	1.25	1.25	1.26	1.26	1.28	1.29	1.31	1.34
OTHER (CLEANING AND SURFACE COATINGS)	0.94	0.45	0.46	0.48	0.49	0.49	0.50	0.50	0.50	0.50	0.51	0.51	0.52	0.53	0.54
OIL AND GAS PRODUCTION	1.82	1.02	0.87	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
PETROLEUM REFINING	4.69	3.81	3.81	3.75	3.73	3.73	3.73	3.57	3.57	3.57	3.57	3.57	3.58	3.58	3.58
PETROLEUM MARKETING	20.23	19.88	19.89	19.63	19.55	19.68	19.80	19.93	20.05	20.17	20.29	20.59	20.74	21.05	21.50
OTHER (PETROLEUM PRODUCTION AND MARKETIN	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CHEMICAL	7.08	5.52	5.59	5.13	5.04	5.11	5.13	5.15	5.18	5.20	5.22	5.32	5.37	5.46	5.62
FOOD AND AGRICULTURE	1.77	1.70	1.70	1.69	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.71	1.73	1.76	1.80
MINERAL PROCESSES	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.27
METAL PROCESSES	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
WOOD AND PAPER	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
GLASS AND RELATED PRODUCTS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ELECTRONICS	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
OTHER (INDUSTRIAL PROCESSES)	5.26	5.44	5.48	5.10	5.11	5.15	5.18	5.20	5.23	5.26	5.29	5.35	5.37	5.43	5.51
Stationary Subtotal	**87.58**	**73.92**	**72.35**	**69.10**	**69.01**	**69.33**	**69.57**	**69.72**	**70.01**	**70.31**	**70.61**	**71.60**	**72.09**	**73.09**	**74.63**
Area-Wide															
CONSUMER PRODUCTS	71.55	64.52	64.32	61.82	62.21	62.53	62.92	63.32	63.71	64.10	64.49	65.27	65.66	66.43	67.56
ARCHITECTURAL COATINGS AND RELATED PROCE	37.22	29.36	20.00	17.44	17.57	17.71	17.85	18.00	18.14	18.29	18.44	18.76	18.92	19.25	19.65
PESTICIDES/FERTILIZERS	1.04	1.18	1.19	1.23	1.26	1.28	1.32	1.36	1.40	1.44	1.48	1.60	1.66	1.78	2.04
ASPHALT PAVING / ROOFING	0.50	0.51	0.51	0.52	0.52	0.52	0.53	0.53	0.54	0.54	0.54	0.55	0.55	0.56	0.57
RESIDENTIAL FUEL COMBUSTION	0.84	0.81	0.85	0.85	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.87	0.88	0.88
FARMING OPERATIONS	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNPAVED ROAD DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FUGITIVE WINDBLOWN DUST	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FIRES	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
MANAGED BURNING AND DISPOSAL	0.36	0.37	0.38	0.39	0.39	0.40	0.41	0.42	0.42	0.43	0.44	0.45	0.46	0.47	0.50
COOKING	1.18	1.18	1.19	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.28	1.29	1.30	1.32
Area-Wide Subtotal	**113.15**	**98.39**	**88.90**	**83.90**	**84.48**	**84.98**	**85.58**	**86.17**	**86.78**	**87.38**	**87.98**	**89.24**	**89.86**	**91.12**	**92.98**

On-Road Mobile															
LIGHT DUTY PASSENGER (LDA)	120.17	88.26	74.34	56.31	50.86	45.95	41.97	38.37	35.39	32.75	30.49	26.78	25.12	22.48	19.15
LIGHT DUTY TRUCKS - 1 (LDT1)	19.26	15.66	13.58	10.73	9.74	8.79	8.16	7.55	6.99	6.45	5.97	5.10	4.70	4.27	3.75
LIGHT DUTY TRUCKS - 2 (LDT2)	38.63	33.87	29.60	24.19	22.74	21.56	20.79	20.12	19.52	18.91	18.36	17.38	16.87	16.06	15.04
MEDIUM DUTY TRUCKS (MDV)	19.78	17.22	15.27	12.78	12.13	11.58	11.28	10.92	10.61	10.31	10.00	9.42	9.12	8.47	7.55
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	12.44	10.65	8.68	6.63	6.28	5.99	5.78	5.55	5.33	5.12	4.92	4.52	4.33	3.95	3.40
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	1.92	1.87	1.54	1.18	1.10	1.04	0.98	0.93	0.88	0.83	0.79	0.71	0.67	0.60	0.52
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	4.96	4.15	3.32	2.42	2.21	2.02	1.86	1.69	1.54	1.40	1.28	1.05	0.95	0.82	0.69
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	2.99	2.91	2.44	1.93	1.83	1.68	1.51	1.32	1.14	1.02	0.91	0.70	0.63	0.50	0.35
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.01	0.12	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.12	0.15	0.14	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.10	0.09	0.09	0.08
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.76	0.89	0.78	0.66	0.65	0.63	0.62	0.60	0.58	0.57	0.55	0.51	0.49	0.47	0.45
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	8.42	9.27	10.31	8.64	8.32	7.95	7.56	7.08	6.60	6.14	5.69	4.89	4.54	3.95	3.37
MOTORCYCLES (MCY)	5.28	7.47	6.92	6.20	5.97	5.79	5.66	5.60	5.55	5.51	5.49	5.45	5.45	5.49	5.63
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.35	0.32	0.32	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.28	0.27	0.26	0.24	0.24
HEAVY DUTY GAS URBAN BUSES (UB)	0.38	0.34	0.35	0.34	0.32	0.32	0.33	0.34	0.35	0.36	0.36	0.37	0.38	0.39	0.41
SCHOOL BUSES (SB)	0.20	0.18	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.13
OTHER BUSES (OB)	0.44	0.42	0.37	0.29	0.26	0.24	0.22	0.21	0.19	0.18	0.17	0.16	0.16	0.15	0.13
MOTOR HOMES (MH)	0.82	0.63	0.56	0.43	0.38	0.34	0.30	0.27	0.23	0.20	0.18	0.13	0.11	0.08	0.05
On-Road Subtotal	**236.92**	**194.39**	**168.83**	**133.43**	**123.49**	**114.57**	**107.71**	**101.21**	**95.57**	**90.42**	**85.82**	**77.81**	**74.14**	**68.26**	**61.05**
Other Mobile															
AIRCRAFT	4.63	5.07	5.22	5.51	5.66	5.81	5.90	5.99	6.08	6.17	6.26	6.43	6.52	6.69	6.87
TRAINS	1.53	1.56	1.54	1.51	1.50	1.50	1.51	1.52	1.52	1.53	1.54	1.56	1.57	1.60	1.64
SHIPS AND COMMERCIAL BOATS	3.46	3.51	3.48	3.43	3.41	3.38	3.34	3.30	3.27	3.24	3.21	3.28	3.32	3.40	3.66
RECREATIONAL BOATS	34.94	32.94	32.10	30.16	29.08	28.15	27.38	26.73	26.19	25.72	25.32	24.68	24.43	24.02	24.11
OFF-ROAD RECREATIONAL VEHICLES	3.32	3.96	3.96	4.05	4.10	4.18	4.27	4.37	4.49	4.62	4.76	5.06	5.23	5.60	6.19
OFF-ROAD EQUIPMENT	63.04	60.86	57.07	51.15	48.48	45.63	43.35	41.26	39.39	37.67	36.18	33.85	33.05	31.91	31.06
FARM EQUIPMENT	0.51	0.46	0.44	0.39	0.37	0.36	0.34	0.31	0.28	0.26	0.24	0.20	0.18	0.15	0.13
FUEL STORAGE AND HANDLING	15.20	14.19	13.44	9.67	8.84	8.19	7.61	7.10	6.65	6.26	5.91	5.36	5.14	4.75	4.27
Other Mobile Subtotal	**126.63**	**122.56**	**117.24**	**105.88**	**101.44**	**97.20**	**93.70**	**90.58**	**87.87**	**85.47**	**83.42**	**80.43**	**79.44**	**78.11**	**77.93**
Grand Total	**564.28**	**489.27**	**447.32**	**392.31**	**378.42**	**366.07**	**356.55**	**347.69**	**340.23**	**333.58**	**327.83**	**319.08**	**315.54**	**310.58**	**306.58**

ROG - LA WHOLE COUNTY															
Changes to Baseline*															
	2002	**2005**	**2006**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2017**	**2018**	**2020**	**2023**
HHDD Trucks	0	-2.61	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides/Fertilizers Corr.	-0.07	-0.04	-0.06	-0.07	-0.07	-0.07	-0.08	-0.10	-0.12	-0.14	-0.16	-0.18	-0.19	-0.21	-0.21
Reflash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Fleet	0.00	0.00	-0.01	-0.05	-0.07	-0.09	-0.09	-0.08	-0.07	-0.07	-0.06	-0.05	-0.04	-0.02	0.00
Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AB 1493	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.22	-0.21	-0.28	-0.35	-0.50	-0.57	-0.72	-0.93
Moyer	0.00	0.00	-0.02	-0.06	-0.09	-0.11	-0.14	-0.16	-0.14	-0.14	-0.12	-0.10	-0.06	0.00	0.00
Consumer Products	0.00	0.00	0.00	-2.69	-2.71	-2.72	-2.74	-2.76	-2.77	-2.79	-2.81	-2.84	-2.86	-2.89	-2.94
Off-road	0.00	0.00	0.00	0.00	0.00	-0.38	-0.42	-0.45	-0.48	-0.51	-0.54	-0.60	-0.63	-0.69	-0.62
Ships	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Summary	**-0.07**	**-2.66**	**-0.09**	**-2.87**	**-2.94**	**-3.37**	**-3.54**	**-3.77**	**-3.80**	**-3.93**	**-4.05**	**-4.26**	**-4.35**	**-4.53**	**-4.71**

* These are already included in "Adjusted Baseline" sheets
and include Rules adopted through Dec. 31, 2006 and recently identified previously uninventoried categories

Appendix B

110(a)(2) Infrastructure SIP

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Introduction and Background

Section 110 (a) of the Clean Air Act (CAA) requires states to submit an implementation plan to the U.S. EPA Administrator that provides for implementation, maintenance, and enforcement of national ambient air quality standards. Section 110(a)(2) lists the elements that are to comprise the implementation plan. Several of the elements in §110(a)(2) specifically address the need for states to demonstrate the ability to implement, maintain, and enforce the air quality standards. These elements are sometimes compiled and submitted separately in what is referred to as an "infrastructure" SIP. This document is the infrastructure SIP for the new 8-hour ozone and PM2.5 air quality standards.

The elements of §110(a)(2) are listed below. Two elements that are not part of an infrastructure SIP but addressed separately elsewhere are underlined.

- Enforceable Emission Limitations and Other Control Measures (§110(a)(2)A)) (see Appendix G)
- Air Quality Monitoring, Compilation, Data Analysis, and Reporting (§110(a)(2)(B))
- Enforcement and Stationary Source Permitting (§110(a)(2)(C)
- Interstate Transport (§110(a)(2)(D)) (see Appendix C)
- Resources, Conflict of Interest, and Emergency Backstop (§110(a)(2)(E))
- Stationary Source Emissions Monitoring and Reporting (§110(a)(2)(F))
- Emergency Powers and Contingency Plans (§110(a)(2)(G))
- SIP Revision For Revised Air Quality Standards or New Attainment Methods (§110(a)(2)(H))
- SIP Revisions for New Nonattainment Areas (§110(a)(2)(I))
- Consultation and Public Notification (§110(a)(2)(J))
- Air Quality Modeling and Reporting (§110(a)(2)(K))
- Major Stationary Source Permitting Fees (§110(a)(2)(L))
- Consultation with Local Entities (§110(a)(2)(M))

Most of these elements are addressed in the comprehensive §110(a)(2) SIP submitted in response to the CAA of 1970 and approved by U.S. EPA in 1979 in 40 CFR 52.220. This submittal continues to affirm ARB's commitment to comply with §110(a)(2) requirements and is incorporated by reference into this submittal.

The following discussions respond to the new elements required by the 1990 CAA Amendments and commitments required by the adoption of new ozone and PM2.5 air quality standards.

§110(a)(2)(B) Air Quality Monitoring, Compilation, Data Analysis, and Reporting

States are to establish and operate devices, methods, systems, and procedures to monitor, compile, and analyze ambient air quality data and to provide the data to U.S. EPA.

California has an extensive air quality monitoring network operated by ARB and local air quality districts that collects air quality data that are compiled, analyzed, and reported to U.S. EPA. ARB's website contains up-to-date information about air quality monitoring, including a description of the network and information about monitoring of ozone, PM2.5, and meteorology. See http://www.arb.ca.gov/aaqm/aaqm.htm with links to all elements of the program, and the recent report on ARB's PM2.5 monitoring program at http://www.arb.ca.gov/pm/pm25_monitor_2005.pdf.

In addition to the network of federally-approved reference monitors that measure PM2.5 mass, ARB operates continuous PM2.5 mass monitors. For PM2.5 speciation, ARB analyzes filters collected by a network of reference monitors located throughout California with concentrations in PM2.5 nonattainment areas. The PM2.5 data can be accessed from two interactive databases: Aerometric Data Analysis and Management (ADAM), that provides historical data, and the Air Quality and Meteorological Information System (AQMIS), that provides real-time data. More details about ARB's Air Monitoring Program, including monitoring provided by local air districts, can be found at http://www.arb.ca.gov/aaqm/mldaqsb/amn.htm.

The 2006 California Almanac of Emissions and Air Quality includes a five-year summary of PM2.5 air quality data. This report can be found at http://www.arb.ca.gov/aqd/almanac/almanac06/almanac06iu.htm.

ARB commits to continue to operate an air quality monitoring network that complies with U.S. EPA requirements and to provide quarterly reports of compiled and analyzed air quality monitoring data to U.S. EPA.

§110(a)(2)(C) Enforcement and Stationary Source Permits

States are to implement a program for the enforcement of control measures associated with the "attainment SIP" and a permit program for stationary sources.

ARB's Enforcement Program covers mobile and stationary sources, consumer products, and fuels. Details about the program can be found at http://www.arb.ca.gov/enf/enf.htm.

ARB reviews and audits the programs of the local air pollution control and air quality management districts (districts) as a part of its oversight role with respect to districts in California and in accordance with Section 41500 of the Health and Safety Code. In addition, ARB reviews district rules at the draft, proposed, and adopted stages of their development to ensure that the rules meet all applicable state and federal requirements.

ARB maintains a rule review database accessible to the public to make comments and rules easily accessible.

ARB does not have authority to issue permits to stationary sources of air pollution. The responsibility for permitting such sources rests with the local air districts. This includes prevention of significant deterioration (PSD) and new source review (NSR) preconstruction permitting programs for attainment and nonattainment pollutants, respectively. California Health and Safety Code Section 39002 grants to ARB the ability to undertake control activities in any area where it determines that districts have failed to meet the responsibilities given to it for the control of air pollution from stationary sources. District permitting regulations are federally enforceable because all have been approved by U.S. EPA as part of the state SIP. Local air district permit programs are discussed at http://www.arb.ca.gov/permits/permits.htm.

ARB commits to the continued enforcement of control measures for which it has jurisdiction and the continued oversight of local district permitting and enforcement programs with respect to measures required by the CAA.

§110(a)(2)(E) Resources, Conflict of Interest, and Emergency Backstop

States are to provide assurances that (i) adequate personnel, funding, and legal authority will be available to carry out the SIP; (ii) a majority of its state board members represent the public interest and do not derive a significant portion of their income from entities that are subject to permits, and that conflicts of interest of members be adequately disclosed; and (iii) the State has responsibility for ensuring adequate implementation of plan provisions to be carried out by local districts.

The California Legislature annually approves ARB's funding and personnel resources for carrying out the programs of the SIP to demonstrate attainment of the PM2.5 and 8-hour ozone standards. Districts' budgets are approved annually by each district's governing board. The annual budget process provides a periodic update that enables ARB and districts to adjust funding and personnel needs. While it is not legally possible for ARB and districts to provide specific commitments about future year budgets (funding and staff resources), the annual budget appropriations process undertaken by the California State Legislature enables ARB to present a request for resources required to meet the mandates of the federal Clean Air Act. Since ARB's Clean Air Act-mandated programs have received State funding for more than 30 years, and since there is consistently strong public support in California for providing clean air, it is reasonable to assume that implementation of the Clean Air Act mandates in California will continue to obtain the necessary funding.

Through fiscal year 2006-2007, about 90 percent of ARB's funding is devoted to meeting the Clean Air Act mandates. The majority of ARB's budget currently consists of dedicated funds that are collected from regulated emission sources and can only be used for air pollution control. These dedicated fees are periodically adjusted in order to provide necessary funding for the ARB's programs. Air districts receive funding from

fees paid by regulated businesses, motor vehicle registration fees, state and federal grants, and other local sources. Collectively, the 2006-2007 ARB and local air districts' budgets total about $685 million with about 3,100 full-time equivalent staff positions.

California Government Code Sections 87100-87105 specify conflict of interest requirements for members of ARB and local district boards. These requirements specifically prohibit all state and local public officials from participating in governmental decisions for which they have a financial interest and also require ARB and local districts to develop conflict of interest policies to meet these legal requirements.

California Health and Safety Code Section 39002 grants to ARB overall regulatory authority for local districts' programs and power to undertake a district's air pollution control programs if the ARB determines that a district has failed to meet the responsibilities given to it by this section or by any other provision in State law.

ARB commits to actively maintain programs for the enforcement of control measures included in the approved SIP and measures required by the CAA.

§110(a)(2)(F) Stationary Source Emissions Monitoring and Reporting

States are to require the installation, maintenance, and replacement of equipment to monitor stationary sources of emissions by the owners or operators of these sources and the provision of periodic reports on these emissions.

40CFR51.214 requires every SIP to include requirements for the monitoring of emissions from major stationary sources as specified in 40CFR51 Appendix P. Every air district in California has adopted regulations to implement the requirements of 40CFR51.214, and all of these district regulations have been approved by U.S. EPA as part of the state SIP. California Health & Safety Code Section 42700 et seq encourages districts to require emission monitoring devices on major stationary sources, and many districts have adopted stationary source monitoring regulations in response.

ARB maintains a database with emissions data for more than 10,000 stationary source facilities in California at http://www.arb.ca.gov/ei/disclaim.htm. In addition, ARB maintains the latest reports of emissions from stationary sources at http://www.arb.ca.gov/ei/emissiondata.htm where these emissions can be viewed from a statewide, air basin, or county level, by source category. The local air districts are responsible for providing these data to ARB.

ARB commits to continue its oversight of air district stationary source monitoring requirements and to the reporting of data collected by such monitoring activities.

§110(a)(2)(G) Emergency Powers and Contingency Plans

States are to provide for authority comparable to that in Section 303, which provides legal authority to the U.S. EPA to halt the emission of air pollutants causing or contributing to injury to public or welfare. U.S. EPA is authorized to either bring a lawsuit in federal court or, if such civil action cannot assure prompt protection of public health or welfare, to issue such orders as may be necessary to protect public health or welfare or the environment. In addition, states are to provide for adequate contingency plans to implement such authority.

The authority granted to the U.S. EPA Administrator is vested in ARB and the air pollution control/air quality management districts in California under California Health & Safety Code Section 42400 et seq. These sections apply to a range of emission violations and impose penalties that are equivalent to or exceed comparable federal penalties for the same violations.

The requirement for states to provide for adequate contingency plans to implement such authority is intended to establish emergency episode plans for responding to elevated pollutant levels in urban areas. Emergency episode plans are required in areas that record pollutant concentrations in excess of threshold levels specified in 40CFR51.150. U.S. EPA is proposing to amend this regulation to address new ozone and $PM_{2.5}$ standards.

ARB commits to submit any necessary revisions to its Air Pollution Emergency Plan upon adoption of amended guidance by U.S. EPA.

§110(a)(2)(H) SIP Revisions For Revised Air Quality Standards Or New Attainment Methods

States are to provide for revision of SIPs from time to time when air quality standards are revised or new attainment methods become available or when U.S. EPA informs states that current SIPs are inadequate to attain standards or to comply with additional requirements under the Clean Air Act.

ARB is submitting a revised SIP that responds to revised and new air quality standards for both 8-hour ozone and PM2.5.

ARB commits to submit SIP revisions whenever revised air quality standards are promulgated by U.S. EPA.

§110(a)(2)(I) SIP Revisions for New Nonattainment Areas

States are to submit SIP revisions for newly designated nonattainment areas to meet the requirements of Part D - Plan Requirements for Nonattainment Areas under Clean Air Act Title I - Air Pollution Prevention and Control. Part D of the Clean Air Act specifies both general requirements for all SIPs and specific requirements for different criteria pollutants. ARB maintains all SIP documents at: http://www.arb.ca.gov/planning/sip/sip.htm.

ARB commits to submit SIP revisions whenever areas of the state are newly designated nonattainment for any federal ambient air quality standard.

§110(a)(2)(J) Consultation and Public Notification

States are to meet the applicable requirements of CAA Section 121 (relating to consultation), Section 127 (relating to public notification), and Part C (relating to prevention of significant deterioration (PSD) of air quality and visibility protection).

Section 121 requires that states provide a satisfactory process of consultation with general purpose local governments, designated organizations of elected officials of local governments, and any affected federal land manager in carrying out CAA requirements.

California Health and Safety Code Section 41650 et seq requires ARB to conduct public hearings and to solicit testimony from air districts, air quality planning agencies, and the public when adopting local nonattainment plans for inclusion in the SIP. Additionally, the California Administrative Procedures Act, Government Code Section 11340 et seq, requires notification and provision of comment opportunities to all parties affected by proposed regulations.

ARB commits to maintaining a process of consultation with parties designated under Section 121.

Section 127 requires the states to provide measures which will be effective to notify the public on a regular basis of instances or areas in which any air quality standard is exceeded during the preceding calendar year, to advise the public of the health hazards associated with such pollution, and to enhance public awareness of measures that can be taken to prevent such standards from being exceeded.

California Health and Safety Code Section 39607 requires ARB to implement a program for securing air quality data in each air basin and reporting these data to the public. ARB maintains these air quality data and the other information required by Section 127 on its website, which is continuously available to the public.[1]

[1] http://www.arb.ca.gov/aqd/aqinfo.htm, http://www.arb.ca.gov/research/health/health.htm, http://www.arb.ca.gov/html/cando.htm, viewed on February 1, 2007.

ARB commits to maintaining a public information and education program that satisfies the requirements of Section 127.

Many air districts in California have adopted regulations for the prevention of significant deterioration (PSD) that have been approved by U.S. EPA. In those areas where approvable regulations have not been adopted, U.S. EPA enforces PSD requirements through a federal stationary source permitting program under enabling authority prescribed by 40CFR52.21.

ARB commits to ensuring that PSD regulations are implemented in California.

§110(a)(2)(K) Air Quality Modeling and Reporting

States are to provide for the use of air quality modeling to predict the effect of emissions on ambient air quality and to submit data related to such modeling when requested by U.S. EPA.

ARB's air quality modeling work complies with U.S. EPA's final guidance on the use of models in attainment demonstrations for the 8-hour ozone standard and uses U.S. EPA's latest draft final guidance for modeling PM2.5. This is a rapidly-evolving field in which ARB endeavors to use the latest methodology and techniques, and documents information that its staff uses when conducting modeling or when evaluating the performance of air quality models used for this purpose. ARB consults and works closely with local districts that conduct their own regional air quality modeling.

ARB provides air quality modeling software and documentation with links to databases and search engines at http://www.arb.ca.gov/html/soft.htm#modeling.

ARB commits to continue to use air quality models in accordance with both U.S. EPA and ARB's currently approved modeling guidance and protocols and the continued submittal of data and modeling results to U.S. EPA.

§110(a)(2)(L) Major Stationary Source Permitting Fees

States are required to assess the owner or operator of each major stationary source with fees sufficient to cover the reasonable costs of reviewing and acting upon any application for such a permit, and if a permit is granted, the reasonable costs of implementing and enforcing the terms and conditions of the permit. Owners or operators are also required to comply with the fee provisions of Title V Sections 501 – 507 of the Clean Air Act. Such fees are required to be payable to the permitting authority.

As noted above, responsibility to issue permits for stationary sources of air pollution is vested with the local air districts, and each air district in California has adopted regulations that require an additional fee for facilities subject to Title V requirements.

Information concerning these permits issued by local air districts is found at http://www.arb.ca.gov/permits/airdisop.htm and http://www.arb.ca.gov/permits/permits.htm.

ARB commits to continue to implement district-adopted major stationary source permit fee regulations.

§110(a)(2)(M) Consultation with Local Entities

States are to provide for consultation and participation by local political subdivisions affected by the plan.

California is divided into local air districts, which are county or regional local government authorities that have responsibility for controlling air pollution from stationary sources. A map of the local air districts showing boundaries for each district is found at http://www.arb.ca.gov/capcoa/dismap.htm. Links to the local air districts' web sites can be found at http://www.arb.ca.gov/capcoa/roster.htm.

ARB consults with and provides liaison with all local air districts and provides frequent and regular communication and consultation with management and staff of local air districts. Since local air district boards are composed of local elected officials, this provides for the regular consultation and participation with local government entities (cities and counties) affected by the SIPs. California Health and Safety Code Section 41650 et seq requires the ARB to conduct public hearings and to solicit testimony from air districts, air quality planning agencies, and the public when adopting local nonattainment plans for inclusion in the SIP.

ARB commits to maintaining a consultation process with local political subdivisions affected by the SIP.

Appendix C

Interstate Transport State Implementation Plan (SIP) for 8-hour Ozone and PM2.5 to satisfy the Requirements of Clean Air Act section 110(a)(2)(D)(i) for the State of California

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Introduction

Sections 110 (a)(1) and (2) of the Clean Air Act require states to submit SIPs that implement, maintain, and enforce a new or revised national ambient air quality standard within 3 years following promulgation of the standard. Among the SIP elements identified in Section 110(a)(2) is the requirement to address the transport of pollutants between states. This section also requires states to ensure that their SIP does not interfere with another state's program to prevent significant deterioration of its air quality or interfere with visibility in another state.

In April 2005, the U.S. EPA notified states of their failure to make the required SIP submission addressing interstate transport of pollutants related to ozone and PM2.5. This "failure to submit" finding for the required interstate transport SIPs started a 24-month clock for U.S. EPA to issue a final Federal Implementation Plan (FIP) for any state that does not submit a plan within that time period.

On August 15, 2006, U.S. EPA issued guidance for submitting interstate transport or "Good Neighbor" SIPs. In accordance with that guidance, this document contains documents the findings that California meets the requirements of sections 110 (a)(1) and (2) of the Clean Air Act for both the federal 8-hour ozone standard and the federal PM2.5 standard.

Closest Nonattainment Areas to California

Ozone*:* The closest 8-hour ozone nonattainment areas are Las Vegas, Nevada, and Phoenix-Mesa, Arizona.

PM2.5*:* The closest PM2.5 nonattainment area is Libby, Montana. Libby is more than 900 miles away from the San Joaquin Valley, the nearest PM2.5 nonattainment area in California.

Evaluation of significant contribution to nonattainment or interference with maintenance of attainment standards in another state

U.S. EPA did an analysis for its Clean Air Interstate Rule or CAIR to identify states that were contributing significantly to nonattainment of PM2.5 and ozone in adjacent states. In the preamble to that rule, U.S. EPA stated that:

> "In analyzing significant contribution to nonattainment, we determined it was reasonable to exclude the Western U.S., including the States of Washington, Idaho, Oregon, California, Nevada, Utah and Arizona from further analysis due to geography, meteorology, and topography. Based on these factors, we concluded that the PM2.5 and 8-hour ozone nonattainment problems are not likely to be affected significantly by pollution transported across these States' boundaries. Therefore, for the

> purpose of assessing State's contributions to nonattainment in other States, we have only analyzed the nonattainment counties located in the rest of the U.S."[1] (emphasis added)

The meteorological discussions below provide more detail.

Ozone*:* Ozone episodes over the Southwestern United States are normally associated with strong high pressure systems centered over the Southwest Desert. These meteorological patterns are characterized by clear skies, warm temperatures, and light winds and result in very stagnant conditions over the region. Ozone is not transported over long distances under these conditions. On occasion, the strong high pressure is weakly impacted by migrating low pressure systems over the Pacific Ocean. This has the dual effect of maintaining stagnant conditions over most of the region while allowing weak pressure systems to push air that is high above the surface eastward and to transport ozone trapped in this layer over long distances.

PM2.5*:* The technical support document for the PM2.5 designation of Lincoln County, Montana (containing Libby, Montana) found that the nonattainment area is "localized within and around the vicinity of the town of Libby due to topographical features and meteorology in the area impacted by emissions." Therefore, Libby, Montana's nonattainment status is not affected by emissions produced in other areas and transported to the Libby area.

U.S. EPA's conclusion in CAIR preamble plus the above meteorological summary support the finding that California does not significantly affect nonattainment areas in other states.

California's existing stringent motor vehicle control program, consumer product regulations, stationary source permitting, new source review programs, and new commitments outlined in the California SIP further strengthened by the 8-hour ozone and PM2.5 SIPs will result in steadily decreasing emissions. This greatly reduces the likelihood that emissions from California will contribute significantly to nonattainment in any downwind state.

[1] *Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Interstate Air Quality Rule Preamble),* 69 FR at 4581, January 30, 2004.

Evaluation of interference with Prevention of Significant Deterioration Measures of any other State

U.S. EPA guidance[2] for interstate transport SIPs advises states to make a SIP submission to confirm that major sources in the State are currently subject to prevention of significant deterioration (PSD) and nonattainment new source review (NNSR) preconstruction permitting programs that apply to the 8-hour ozone standard.

For the PM2.5 standard, the guidance advises states to provide a SIP submission to confirm that major sources in the State are subject to PSD and NNSR permitting programs implemented in accordance with U.S. EPA's interim guidance calling for use of PM10 as a surrogate for PM2.5 in the PSD and NNSR programs.

In California, all areas are subject to some form of preconstruction program for ozone and PM2.5. These rules are as stringent, or more stringent, than the federal preconstruction programs (PSD and NNSR). For ozone, California is on track to submit SIPs per the Phase II 8-hour Ozone Implementation Rule. For PM 2.5, California's preconstruction programs are being implemented in accordance with EPA's interim guidance calling for the use of PM10 as a surrogate for PM2.5 emissions.

The following air districts are in attainment of the federal 8-hour ozone and PM2.5 standards and have a SIP approved PSD rule.

- Mendocino County Air Pollution Control District
- Monterey Bay Unified Air Pollution Control District
- Northern Sonoma County Air Pollution Control District
- North Coast Unified Air Quality Management District
- Sacramento Metro Air Quality Management District (PM2.5)

On a case-by-case basis, U.S. EPA has delegated partial PSD permitting authority to the following air districts that are in attainment of the federal 8-hour ozone and PM2.5 standards.

- Antelope Valley Air Quality Management District
- Bay Area Air Quality Management District
- San Diego Air Pollution Control District

For all other areas that are in attainment of federal standards, U.S. EPA retains federal PSD permitting authority.

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[2] *Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards*, memo from William T. Harnett to Regional Air Division Directors dated August 15, 2006, Page 8.

The following air districts are nonattainment of the federal 8-hour ozone standard and have new source review rules or are on track to submit an NSR rules as part of their 8-hour ozone SIP development process. These rules are or will be equivalent to or more stringent than the federal requirements.

- Antelope Valley Air Quality Management District (Antelope Valley and Western Mojave Desert Nonattainment Area)
- Amador County Air Pollution Control District (Central Mountain Counties Nonattainment Area)
- Bay Area Air Quality Management District
- Butte County Air Quality Management District
- Calaveras County Air Pollution Control District (Central Mountain Counties Nonattainment Area)
- El Dorado County Air Pollution Control District (Sacramento Federal Nonattainment Area)
- Feather River Air Quality Management District (Sacramento Federal Nonattainment Area)
- Imperial Air Pollution Control District
- Kern County Air Pollution Control District (Easter Kern Nonattainment Area)
- Mariposa County Air Pollution Control District (Southern Mountain Counties Nonattainment Area)
- Mojave Desert Air Pollution Control District (Antelope Valley and Western Mojave Desert Nonattainment Area)
- Northern Sierra Air Quality Management District (Western Nevada County Nonattainment Area)
- Placer County Air Pollution Control District (Sacramento Federal Nonattainment Area)
- Sacramento Metropolitan Air Quality Management District (Sacramento Federal Nonattainment Area)
- San Joaquin Valley Unified Air Pollution Control District
- South Coast Air Quality Management District
- Tuolumne County Air Pollution Control District (Southern Mountain Counties Nonattainment Area)
- Ventura County Air Pollution Control District
- Yolo Solano Air Quality Management District (Sacramento Federal Nonattainment Area)

The following air districts are nonattainment of the federal PM2.5 standard and already have NSR rules in place for PM10. These rules are equivalent to or more stringent than the federal requirements.

- South Coast Air Quality Management District
- San Joaquin Valley Unified Air Pollution Control District

Evaluation of interference with other states' measures required to meet Regional Haze and Visibility SIP requirements

U.S. EPA's guidance[3] states that states and regional planning organizations are currently engaged in the task of identifying Class I areas impacted by each state's emissions and developing strategies for addressing regional haze to be included in the States' regional haze SIPs. Since these regional haze SIPs are not due until December 17, 2007, states will not be required to address this requirement until the Regional Haze SIPs are submitted.

California is on track to submit its Regional Haze SIP by December 17, 2007. The Regional Haze SIP will address interstate regional haze impacts.

[3] *Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards*, memo from William T. Harnett to Regional Air Division Directors dated August 15, 2006, Page 9.

Appendix D

Reasonable Further Progress and Contingency Reductions

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Introduction

Reasonable further progress (RFP) refers to the annual emission reductions required to demonstrate continued and steady progress toward attaining air quality standards. A SIP must demonstrate both RFP and attainment to be approvable. It must also include contingency emission reductions that must be achieved if a nonattainment area fails to meet certain milestones. The RFP requirements for the 8-hour ozone standard are described in the "Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard," and build upon the requirements specified in Clean Air Act sections 172(c)(2), 182(b)(1) and 182(c)(2)(b).

This appendix will summarize how California meets its RFP and contingency reduction requirements. It is important to note that the requirements are met in every nonattainment area with already-adopted measures. No new emission reduction commitments are required and no reductions from the State Strategy's proposed new measures are needed to meet the requirements.

RFP Requirements

RFP requirements vary by nonattainment classification. The following is a discussion about RFP requirements for California nonattainment areas as initially designated by U.S. EPA.

Areas with a basic classification that can attain the standard within the first five years after the designations become effective (2004-2009) do not have to demonstrate RFP. Three basic areas, Sutter Buttes, Butte County and San Diego County will meet the federal standard by 2009. Areas with a marginal classification – Imperial County and San Francisco Bay Area – are not subject to RFP requirements.

Moderate and basic areas that require more than five years to attain must demonstrate RFP. Their RFP demonstrations include an initial 15 percent reduction in ROG and/or NOx emissions from the 2002 baseline ROG inventory by 2008. They then must achieve additional reductions per year, averaged across each consecutive 3-year period or part thereof until their attainment year. Basic areas needing additional time to attain include: Eastern Kern, Southern Mountain Counties, Central Mountain Counties, and Western Nevada County. Moderate areas include: Ventura, Antelope Valley and Western Mojave Desert.

Areas whose 1-hour ozone rate of progress plans were not approved by the U.S. EPA are subject to different RFP requirements. These areas still must meet the initial RFP target of 15 percent ROG reductions for the first six years (2002-2008), as set forth in Clean Air Act section 182(b)(1). They cannot use NOx emission reductions to satisfy the initial target when ROG emissions are not sufficient. The areas subject to this restriction are Coachella Valley, Antelope Valley, and Western Mojave Desert, which comprise the former Southeast Desert 1-hour ozone nonattainment area. This presents a challenge for the former Southeast Desert areas because their nonattainment status is due in part to pollution transported from the South Coast. In such situations,

U.S. EPA allows the nonattainment area to account for emissions occurring, and emission reductions achieved, in upwind areas to be credited towards rate of progress. With transport included in the calculation, the Coachella Valley meets rate of progress requirements.

For RFP, nonattainment areas classified serious and above must demonstrate an 18 percent reduction in ROG and/or NOx emissions from the 2002 baseline ROG inventory by 2008. In the years that follow, they must demonstrate, on average, an additional 3 percent per year reduction in ROG and/or NOx emissions until their attainment year. Serious areas are: San Joaquin Valley, Coachella Valley and Sacramento. Note that for the reasons given above, Coachella Valley is subject to a 15 percent ROG-only reduction requirement from 2002 to 2008. The South Coast Air Basin is classified as severe.

For moderate and above 8-hour ozone nonattainment areas, a limited amount of NOx reductions may also be used, to a point, as a substitution for ROG reductions for RFP. NOx emission reductions creditable toward the RFP requirement cannot be greater than the cumulative NOx reductions that are necessary to demonstrate attainment. This attainment consistency requirement is meant to prevent the substitution of NOx reductions for progress purposes that would not lead toward attaining the ozone standard.

U.S. EPA has taken the position in guidance, and not in regulation, that for nonattainment areas classified under Subpart 2, reductions needed for progress in the attainment year should equate to those needed for attainment. ARB staff disagrees. We believe a plain reading of the Act indicates that a 3 percent reduction per year is needed between the next-to-last milestone year and the attainment year. For example, in a severe-15 area, the next-to-last milestone year is 2017 and the attainment year is 2018. A 45 percent reduction is needed in 2017 for RFP. Therefore, the RFP requirement for the next year (2018) is three percent more, or 48 percent – and not the reductions needed for attainment.

Upwind Emissions in RFP Demonstrations

Ozone levels are influenced by ROG and NOx emitted both within a nonattainment area and transported from upwind locations. U.S. EPA acknowledges this relationship by allowing emission reductions from upwind locations outside the nonattainment area to be included for RFP, up to 100 kilometers for ROG and 200 kilometers for NOx.

The inclusion of transport contributions of ROG and NOx provides key emission reductions in RFP analyses for the following nonattainment areas: Antelope Valley and Western Mojave Desert, Central Mountain Counties, Coachella Valley, Eastern Kern, Southern Mountain Counties and Western Nevada. Their emission inventories for RFP purposes include ROG and NOx emissions from counties that are (1) entirely within the designated 100km and 200km distances, and (2) part of the area's established federally-approved transport couples.

Federal Motor Vehicle Control Program Adjustments

Section 182(b)(1)(D) of the Clean Air Act stipulates that emission reductions stemming from the federal on-road motor vehicle control program as it existed in 1990 may not be used to help meet minimum emission reduction requirements for RFP purposes. This precludes states from securing the emission reductions required to demonstrate satisfactory progress for ozone simply on the merit of the federal motor vehicle control program as it existed in 1990. The Clean Air Act also prohibits states from taking credit for emission reductions resulting from using gasoline with a Reid vapor pressure limit specified by 1990. States are required to adjust for the benefits of these federal programs in RFP calculations. ARB staff has considered the combined benefits of the federal motor vehicle and fuel volatility programs for purposes of this discussion, and will reference them below as the "federal program" and "federal program adjustments".

California's pioneering efforts to set emission standards from motor vehicles resulted in nationwide emission standards adopted by U.S EPA. In general, California's auto emission standards have been, and are, more stringent than federal standards, particularly for passenger vehicles.

In analyzing what federal program adjustments should be made to California nonattainment area RFP reductions, ARB staff analysis concluded that the federal program did not provide any additional benefits beyond California's program and that the federal program adjustment in all nonattainment areas should be zero. This is a bit different than the rate of progress reductions for the last 1-hour ozone SIP, where some federal program adjustments were made. ARB staff's methodology for calculating the federal program benefits remains unchanged, except to reflect a change in the baseline year from 1990 (for 1-hour ozone plans) to 2002.

California's on-road control program has continued to advance since 1990, so emissions from motor vehicles in 2002 are much lower than they were in 1990. Additionally, large increases in vehicle miles traveled from 1990 to 2002 result in a higher-emitting federal fleet for 8-hour ozone RFP than for the 1-hour ozone rate of progress. Combined, these factors lead to the conclusion that the pre-1990 federal program provides no benefits to California in 8-hour ozone RFP plans.

Contingency Requirements

Contingency reductions are to take effect without further ARB or air district action if the nonattainment area does not achieve an RFP milestone, or if the area does not attain the federal 8-hour ozone or PM2.5 standard at the end of their identified attainment year. This requirement does not apply to marginal nonattainment areas, only to basic, moderate, serious, severe and extreme areas (for RFP only). Since these contingency reductions must be achieved without further action, U.S. EPA has interpreted this to mean that the contingency reductions must be from measures that have already been adopted when the submittal is made (or possibly prior to U.S. EPA taking action).

The bulk of emission reductions needed to attain the federal standards in this submittal are achieved through regulations that make up California's mobile source emission control program, which has been very successful in reducing emissions within California

and represents the foundation supporting attainment of both federal and State ambient air quality standards. ARB has a well established history of adopting and implementing mobile source control regulations on time or earlier than it has committed to do so. As a result, we expect to achieve, and even exceed, our RFP goals without the need for contingency reductions.

For all nonattainment areas, already-adopted measures provide more emission reductions than are needed to meet RFP requirements in every milestone year. Therefore, the emission reductions from adopted measures that go beyond the RFP requirements will constitute the contingency reductions in the unlikely event that the State does not meet the RFP goals.

Failure to meet federal air quality standards is determined by monitored air quality values in the attainment year, and is therefore determined after the end of the attainment year. California's motor vehicle emission control program allows ARB to provide additional emission reductions each year, based on the increasing benefits of measures that are already being implemented. Therefore, ARB proposes to include the benefits of one additional year of its ongoing motor vehicle program, including vehicle fleet turnover, and light-duty vehicle inspection and maintenance in the year following each area's attainment year.

Contingencies for new technologies

In terms of contingency for attainment, additional provisions apply to extreme areas that include new technologies in their attainment plans. These attainment demonstration plans can rely on future advances in emission reduction technologies (referred to as new technologies) if the State, among other things, submits enforceable commitments to develop and adopt contingency measures if the anticipated technologies do not achieve the planned reductions, and if the State demonstrates that the contingency reductions shall be adequate to achieve attainment and reasonable further progress.

These contingency reductions to back-up the new technology provisions are not due until three years before implementation of these new technology provisions. The need for technology development and long-term measures, as well the process for identifying long-term emission reductions is discussed in Chapter 3.

Reasonable Further Progress and Contingency Demonstrations

The following descriptions for each nonattainment area outline California's RFP and related contingency reductions demonstrations. Since already-adopted measures provide all contingency reductions needed for RFP and attainment, the requirement that reductions will occur without any further action by ARB or local air districts is fully met.

ARB staff reports for each nonattainment area will include demonstration of RFP and contingency reductions. Detailed charts providing the background for RFP and contingency reductions for South Coast, San Joaquin Valley, and Coachella Valley, can be found on pages 6-8 of this appendix. All three of these areas are expected to request a change in their nonattainment classifications – extreme for both South Coast

and San Joaquin Valley and severe-15 for Coachella Valley. The charts reflect the anticipated nonattainment classifications.

South Coast

The South Coast meets its RFP targets through 2014 purely on the basis of ROG reductions from the existing control program. From 2017 forward, the South Coast will need to use both ROG and NOx reductions from the existing control program. Reductions from proposed new measures are not needed to achieve the progress targets.

Adopted measures in the South Coast Air Basin are expected to yield enough reductions to meet the RFP goals and will also yield a surplus that will meet the contingency reduction requirements for the area.

San Joaquin Valley

The San Joaquin Valley meets its RFP targets through both ROG and NOx reductions from the existing control program. Reductions from proposed new measures are not needed to achieve the progress targets.

Adopted measures in the San Joaquin Valley are expected to yield enough reductions to meet the RFP goals and will also yield a surplus that will meet the contingency reduction requirements for the area.

Coachella Valley

Because the Southeast Desert 1-hour ozone nonattainment area did not have a federally-approved progress plan, the Coachella Valley's 8-hour RFP plan must demonstrate a 15 percent emission reduction from 2002 to 2008 by relying only on ROG reductions. The area meets this requirement. Expecting the South Coast District to request a bump up to the severe -15 classification for the Coachella Valley, progress is calculated through 2018. Upwind emissions of ROG have been used from Orange County, the portion of San Bernardino County within the South Coast Air Basin, and the portion of Riverside County within South Coast Air Basin. Upwind emissions of NOx from these counties and Los Angeles County have also been included.

Adopted measures in the Coachella Valley are expected to yield enough reductions to meet the RFP goals and will also yield a surplus that will meet the contingency reduction requirements for the area.

Detailed Analysis of South Coast Reasonable Further Progress and Contingency (summer planning, tons per day)

	2002	2008	2011	2014	2017	2020	2023
Baseline ROG	897.2	651.0	599.2	566.4	546.4	536.4	533.6
FMVCP/RVP Adjustment	0	0	0	0	0	0	0
RACT Corrections	0	0	0	0	0	0	0
Adjusted Baseline ROG	897.2	651.0	599.2	566.4	546.4	536.4	533.6
RFP commitment for ROG reductions from new measures		0	0	0	0	0	0
Required % change since previous milestone year (ROG or NOx) compared to 2002		18%	9%	9%	9%	9%	9%
Required % change since 2002 (ROG or NOx)		18%	27%	36%	45%	54%	63%
Target ROG levels		735.7	655.0	574.2	493.5	412.7	332.0
Apparent shortfall in ROG		-84.7	-55.8	-7.8	53.0	123.6	201.7
Apparent shortfall in ROG, %		-9.4%	-6.2%	-0.9%	5.9%	13.8%	22.5%
ROG shortfall previously provided by NOx substitution, %		0	0.0%	0.0%	0.0%	5.9%	13.8%
Actual ROG shortfall, %		-9.4%	-6.2%	-0.9%	5.9%	7.9%	8.7%
Baseline NOx	1078.4	849.6	737.1	649.7	578.0	530.2	505.1
FMVCP Adjustment	0	0	0	0	0	0	0
Adjusted Baseline NOx	1078.4	849.6	737.1	649.7	578.0	530.2	505.1
RFP commitment for NOx reductions from new measures	0	0	0	0	0	0	0
Change in NOx since 2002		228.9	341.3	428.7	500.5	548.2	573.3
Change in NOx since 2002, %		21.2%	31.7%	39.8%	46.4%	50.8%	53.2%
NOx reductions since 2002 already used for RFP substitution and contingency through last milestone year, %		0.0%	3.0%	6.0%	9.0%	17.9%	28.7%
NOx reductions since 2002 available for RFP substitution and contingency in this milestone year, %		21.2%	28.7%	33.8%	37.4%	33.0%	24.4%
Change in NOx since 2002 used for ROG substitution in this milestone year, %		0.0%	0.0%	0.0%	5.9%	7.9%	8.7%
Change in NOx since 2002 used for contingency in this milestone year, %		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Change in NOx since 2002 surplus after meeting substitution and contingency needs in this milestone year, %		18.2%	25.7%	30.8%	28.5%	22.1%	12.7%
Are RFP Requirements Met?		yes	yes	yes	yes	yes	yes
Are Contingency Reduction Requirements Met?		yes	yes	yes	yes	yes	yes

Detailed Analysis of San Joaquin Valley Reasonable Further Progress and Contingency (summer planning, tons per day)

	2002	2008	2011	2014	2017	2020	2023
Baseline ROG	468.0	426.5	405.8	403.7	400.3	402.3	408.8
FMVCP/RVP Adjustment	0	0	0	0	0	0	0
RACT Corrections	0	0	0	0	0	0	0
Adjusted Baseline ROG	468.0	426.5	405.8	403.7	400.3	402.3	408.8
RFP commitment for ROG reductions from new measures		0	0	0	0	0	0
Required % change since previous milestone year (ROG or NOx) compared to 2002		18%	9%	9%	9%	9%	9%
Required % change since 2002 (ROG or NOx)		18%	27%	36%	45%	54%	63%
Target ROG levels		383.8	341.6	299.5	257.4	215.3	173.2
Apparent shortfall in ROG		42.8	64.2	104.2	142.9	187.0	235.6
Apparent shortfall in ROG, %		9.1%	13.7%	22.3%	30.5%	40.0%	50.3%
ROG shortfall previously provided by NOx substitution, %		0	9.1%	13.7%	22.3%	30.5%	40.0%
Actual ROG shortfall, %		9.1%	4.6%	8.5%	8.3%	9.4%	10.4%
Baseline NOx	642.30	567.67	493.11	419.55	362.24	321.68	295.14
FMVCP Adjustment	0	0	0	0	0	0	0
Adjusted Baseline NOx	642.30	567.7	493.1	419.5	362.2	321.7	295.1
RFP commitment for NOx reductions from new measures	0	0	0	0	0	0	0
Change in NOx since 2002		74.6	149.2	222.8	280.1	320.6	347.2
Change in NOx since 2002, %		11.6%	23.2%	34.7%	43.6%	49.9%	54.0%
NOx reductions since 2002 already used for RFP substitution and contingency through last milestone year, %		0.0%	11.6%	16.7%	25.3%	33.5%	43.0%
NOx reductions since 2002 available for RFP substitution and contingency in this milestone year, %		11.6%	11.6%	18.0%	18.3%	16.4%	11.1%
Change in NOx since 2002 used for ROG substitution in this milestone year, %		9.1%	4.6%	8.5%	8.3%	9.4%	10.4%
Change in NOx since 2002 used for contingency in this milestone year, %		2.5%	3.0%	3.0%	3.0%	3.0%	3.0%*
Change in NOx since 2002 surplus after meeting substitution and contingency needs in this milestone year, %		0.0%	6.5%	9.4%	10.1%	7.0%	0.7%
Are RFP Requirements Met?		yes	yes	yes	yes	yes	yes
Are Contingency Reduction Requirements Met?		yes	yes	yes	yes	yes	yes**

* 2024 mobile source program reductions are relied upon to meet 2023 contingency requirements.

** Contingency requirements met in 2023 through reductions from already-adopted mobile source measures.

Detailed Analysis of Coachella Valley
Reasonable Further Progress and Contingency
(summer planning, tons per day)

	2002	2008	2011	2014	2017	2018
Baseline ROG	379.3	299.9	282.0	271.4	265.9	265.0
FMVCP/RVP Adjustment	0	0	0	0	0	0
RACT Corrections	0	0	0	0	0	0
Adjusted Baseline ROG	379.3	299.9	282.0	271.4	265.9	265.0
RFP commitment for ROG reductions from new measures		0	0	0	0	0
Required % change since previous milestone year (ROG or NOx) compared to 2002		15%	9%	9%	9%	3%
Required % change since 2002 (ROG or NOx)		15%	24%	33%	42%	45%
Target ROG levels		322.4	288.3	254.1	220.0	208.6
Apparent shortfall in ROG		-22.50	-6.29	17.32	45.92	56.39
Apparent shortfall in ROG, %		-5.9%	-1.7%	4.6%	12.1%	14.9%
ROG shortfall previously provided by NOx substitution, %		0.0%	0.0%	0.0%	4.6%	12.1%
Actual ROG shortfall, %		-5.9%	-1.7%	4.6%	7.5%	2.8%
Baseline NOx	1159.3	917.2	794.6	697.2	618.1	597.4
FMVCP Adjustment	0	0	0	0	0	0
Adjusted Baseline NOx	1159.3	917.2	794.6	697.2	618.1	597.4
RFP commitment for NOx reductions from new measures	0	0	0	0	0	0
Change in NOx since 2002		242.1	364.7	462.0	541.2	561.9
Change in NOx since 2002, %		20.9%	31.5%	39.9%	46.7%	48.5%
NOx reductions since 2002 already used for RFP substitution and contingency through last milestone year, %		0.0%	3.0%	6.0%	13.3%	23.8%
NOx reductions since 2002 available for RFP substitution and contingency in this milestone year, %		20.9%	28.5%	33.9%	33.4%	24.6%
Change in NOx since 2002 used for ROG substitution in this milestone year, %		0.0%	0.0%	4.3%	7.5%	2.8%
Change in NOx since 2002 used for contingency in this milestone year, %		3.0%	3.0%	3.0%	3.0%	3.0%
Change in NOx since 2002 surplus after meeting substitution and contingency needs in this milestone year, %		17.9%	25.5%	26.5%	22.9%	18.9%
Are RFP Requirements Met?		yes	yes	yes	yes	yes
Are Contingency Reduction Requirements Met?		yes	yes	yes	yes	yes

Appendix E

Potential Impacts of State Strategy Proposed New Measures

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ENVIRONMENTAL IMPACT ANALYSIS

Introduction

The control measures proposed in the State Strategy were developed for the purpose of improving air quality in California. However, as these measures are developed into rules and regulations and subsequently implemented, there is potential for them to have an adverse environmental impact on other natural resources. The California Environmental Quality Act (CEQA) and ARB policy requires an analysis to determine any potentially adverse environmental impacts that may result from adoption of these measures. This appendix presents an analysis of potential impacts and also identifies mitigation measures that can be implemented to offset any potentially significant impacts. The appendix contains three parts: an environmental review checklist, descriptions of cumulative impacts of the State Strategy, and a description of each measure's potential adverse environmental impacts.

California Environmental Quality Act

The California Secretary for Resources has determined that ARB meets the criteria for a Certified State Regulatory Program (Public Resources Code Section 21080.5). This certification allows ARB to adopt rules, regulations, standards and plans but exempts it from the requirement to prepare Initial Studies, Notices of Preparation, Negative Declarations or Environmental Impact Reports (EIRs). As a certified agency, however, ARB is required to prepare a substitute document which is subject to other provisions of CEQA such as avoiding significant adverse effects on the environment where feasible. This appendix considers cumulative impacts and addresses adverse activities and impacts associated with the proposed measures. As required by CEQA, there will be a 45-day public comment period at which time the public can review and comment on this analysis. ARB will respond in writing to all significant environmental concerns raised by the public during this comment period and also at the Board Hearing.

Scope of Analysis

The scope of the analysis is intended to help focus public review and to assure that any questions and comments are appropriate and meaningful. This appendix specifically focuses on potential *adverse* environmental impacts. The remainder of the report emphasizes positive environmental benefits that the proposed strategies will have on air quality which is the purpose and goal of the State Strategy.

This appendix cannot and does not contain a detailed, quantitative impact analysis for each of the control measures in the State Strategy. Because the State Strategy identifies proposed future actions to adopt and implement

emission reduction regulations for which specific regulatory language has not yet been developed, the analysis is necessarily general and qualitative. When a proposed measure is developed and proposed in regulatory format, it will be a process with full public participation. Proposed regulations will undergo a detailed environmental analysis as required by CEQA, will be discussed at public workshops, and will go through the public hearing process as required by law (see the Administrative Procedure Act, Gov. Code section 11340 et seq.). When specific regulatory language is developed, it will be possible to analyze potential environmental impacts in detail. For example, the scope of the impacted population of any given controlled emission source will become further refined during regulatory development. Additionally, cumulative impacts were considered for the State Strategy, recognizing these measures are likely to have various phase-in dates. In this appendix, potential environmental impacts are identified to the extent currently feasible.

Environmental Checklist

An environmental checklist was used to identify and evaluate potential cumulative impacts of the measures proposed in the State Strategy. The environmental effects checked below indicate those that may be affected by the proposed measures. Further discussion will follow regarding the impacts that strategies may have and potential mitigation strategies that can be implemented to lessen the impacts.

☐ Aesthetics	☒ Air Quality	☐ Agricultural Resources
☐ Biological Resources	☐ Cultural Resources	☒ Energy Demand
☐ Geology and Soils	☒ Hazards/ Hazardous Material	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population and Housing
☐ Public Services	☐ Recreation	☒ Solid/Hazardous Waste
☐ Transportation/Traffic	☒ Water Quality	☒ Mandatory Findings

Evaluation of Cumulative Environmental Impacts

	Potentially Significant Impact	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:			
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒
II. AIR QUALITY. Would the project:			
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact	No Impact
III. AGRICULTURE RESOURCES. Would the project:			
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☒	☐
IV. BIOLOGICAL RESOURCES. Would the project:			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal,	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
filling, hydrological interruption, or other means?			
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒
V. CULTURAL RESOURCES. Would the project:			
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒
VI. ENERGY DEMAND. Would the project:			
a) Conflict with adopted energy conservation plans?	☐	☐	☒
b) Result in the need for new or	☒	☐	☐

	Potentially Significant Impact	Less Than Significant Impact	No Impact
substantially altered power or natural gas utility systems?			
c) Create any significant effects on peak and base period demands for electricity and other forms of energy?	☒	☐	☐
d) Comply with existing energy standards?	☐	☐	☒
VII. GEOLOGY AND SOILS. Would the project:			
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒
iv) Landslides?	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:			
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐
c) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒
e) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒
IX. LAND USE AND PLANNING. Would the project:			
a) Physically divide an established community?	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒
X. MINERAL RESOURCES. Would the project:			
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒
XI. NOISE. Would the project result in:			
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
other agencies?			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒
XII. POPULATION AND HOUSING. Would the project:			
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES.			
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			
Fire protection?	☐	☐	☒
Police protection?	☐	☐	☒
Schools?	☐	☐	☒
Parks?	☐	☐	☒
Other public facilities?	☐	☐	☒
XIV. RECREATION			
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒
XV. SOLID/HAZARDOUS WASTE. Would the project:			
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒	☐	☐

	Potentially Significant Impact	Less Than Significant Impact	No Impact
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC. Would the project:			
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
XVII. WATER QUALITY. Would the project:			
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate	☐	☐	☒

	Potentially Significant Impact	Less Than Significant Impact	No Impact
Map or other flood hazard delineation map?			
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE			
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐

Cumulative Potential Adverse Environmental Impacts

Each environmental effect outlined in the environmental checklist is further described below. A detailed reference table at the end of this section identifies each measure in the State Strategy, any potential adverse environmental impacts, and potential mitigation measures.

Several proposed measures are currently in the process of rule development and may have a more detailed assessment of potential significant impacts. However, for the less developed strategies, we have attempted to include any potential impact that reasonably could occur given current knowledge.

I. Aesthetics

Cumulative Impact: No element of the State Strategy is expected to degrade the natural beauty of California. Instead, the State Strategy will have significant positive impacts on aesthetics. Regional haze is expected to be reduced by State Strategy elements that reduce hydrocarbon, nitrogen oxide, and particulate matter emissions.

II. Air Quality

Cumulative Impact: ARB staff believes the cumulative impact of the State Strategy is to substantially improve air quality, however there are potentially significant impacts to air quality. Some strategies may involve trade-offs, where emissions of one pollutant may increase slightly in order to more effectively reduce overall emissions and protect public health.

The four major types of impacts that were considered are related to criteria pollutants, air toxics, greenhouse gases, and stratospheric ozone depleting pollutants.

Criteria Pollutants

Potentially significant impacts on criteria pollutant emissions may occur due to: selective catalytic reduction processes, use of diesel particulate filters, and production and consumption of low-sulfur diesel fuel. However, the cumulative impact of the State Strategy is to reduce emissions of major criteria pollutants (ROG, NOx, SOx, and PM2.5).

Selective Catalytic Reduction — Measures in the State Strategy to reduce NOx from diesel-fueled engines may necessitate use of Selective Catalytic Reduction (SCR). For on-road heavy-duty diesel vehicles in particular, SCR is the preferred emission control strategy for meeting the NOx emission requirements for the 2010 model year. The use of SCR in light-duty diesel vehicles is also being considered by auto manufacturers. SCR reduces NOx into molecular nitrogen

and water by injecting urea into the exhaust upstream of a catalyst. SCR catalysts function well only within a narrow temperature window, and control systems must be in place to keep the exhaust temperature within an optimum range. If exhaust temperatures are too high, the SCR catalyst can be deactivated or fail. If exhaust temperatures are too low, or too much reductant (usually urea) is used, ammonia can become an exhaust byproduct (called "ammonia slip") and can be emitted to the atmosphere. Ammonia slip can worsen as the catalyst ages and becomes less effective.

Diesel Particulate Filters — A number of measures in the State Strategy would require the use of diesel particulate filters, add-on devices that are mounted on the exhaust pipe. Certain types of these diesel particulate filters, referred to as passive filters, accelerate the conversion of nitric oxide (NO) to nitrogen dioxide (NO_2). As such, there is a potential for an adverse effect on the concentration and location of peak ozone levels in the State, especially near centers of diesel activity.

Catalyst manufacturers are aware of the issue, and preliminary analysis suggests that the impacts may be mitigated by designing the system to limit the NO to NO_2 conversion rates. In the near term, the advantages of putting diesel particulate filters into operation to reduce risk from diesel PM and allowing the technology to develop and mature should offset any limited adverse impacts.

Reformulated Gasoline — The purpose of this strategy is to offset or eliminate excess evaporative emissions caused by ethanol permeation through fuel lines and tanks. Reformulating gasoline may require more feedstock and/or more processing which means that impacts associated with this measure could come from an increased demand on refineries. However, air district permitting programs will evaluate and mitigate the air quality and environmental impacts to the extent feasible.

Cold Ironing (Shore-side Power) — This process allows ships to run heating, air conditioning, lights and other operations by plugging into shore-side electrical power. This reduces emissions by allowing ships to shut down the uncontrolled auxiliary engines which traditionally have powered these electric-based activities. There are criteria pollutant emissions associated with the incremental electricity generation from power plants, but they are significantly less than emissions generated by ship engines.

Low Sulfur Diesel Fuel — Low sulfur diesel fuel requires increased hydrotreating of fuel to remove sulfur, which requires increased hydrogen production. Hydrogen production, from petroleum feedstock, has the potential to increase criteria pollutants (particularly NOx) and CO_2 emissions. The most acute impact of any emissions increase could be in the communities near refineries, however, air district permitting programs will evaluate and mitigate the air quality and environmental impacts to the extent feasible.

Electrification of Equipment — Electric forklifts, dockside electrical hookups for larger marine vessels, and other strategies may incrementally increase electricity demand from power plants. The increase in power production will have an incidental increase in emissions (primarily NOx) from power plants. Air district permitting programs are in place to limit these emission increases. Overall, emissions should decrease significantly as fuels such as diesel and propane are replaced by the much cleaner natural gas burned at well-controlled power plants.

Locomotives — Diesel oxidation catalysts (DOCs) operating under high loads and temperatures can increase SO2 to SO4 formation. Locomotives fueled out of state will use non-road diesel fuel with sulfur levels lowered from 5,000 to 500 ppmw on June 1, 2007. However, since most refueling for interstate locomotives occurs in-state, and locomotives in California typically use ultra low sulfur diesel (<15 ppmw), this is not a significant source of SOx. SOx is emitted in direct proportion to the diesel fuel sulfur content.

Vehicle Retirement Program — Scrapping retired vehicles involves the use of heavy-duty equipment to crush vehicles and then transport the recyclable materials to markets which often times are located overseas. The increased processing and transport of the scrapped materials could create additional emissions, however, the State Strategy also includes measures to reduce emissions from ships and heavy-duty off-road equipment. The benefit of retiring high-polluting vehicles greatly outweighs the emissions from processing.

Air Toxics

Potentially significant air toxics impacts could occur due to reformulation of consumer products and the use of alternative fuels, alternative fuel additives and alternative aftertreatment systems. However, any new formulations of these products and additives would be closely scrutinized to prevent the addition of toxic compounds. These potential impacts will be greatly offset by the substantial reductions in toxics from diesel engines required by the State Strategy. The cumulative impact of the State Strategy is to greatly reduce emissions of toxic compounds. A brief description of potential impacts of the strategies is provided below.

Selective Catalytic Reduction — Since SCR technology represents a significant departure from conventional emission controls deployed on motor vehicles, there is the potential for these systems to emit new toxic substances that have not been readily observed in previous studies, and/or exhibit an increase in some currently emitted toxic substances due to urea-related chemistry. Such secondary emissions are likely to include organonitrogen compounds, many of which are listed as toxic air contaminants (TAC) and are carcinogenic.

Vehicle Retirement Program — High-mileage and older vehicles are likely candidates for scrappage. Their deterioration leads to increased emissions. Once vehicles are scrapped, they can no longer pollute. However, vehicles commonly contain lead, chromium and mercury which may be released during the scrapping process. These toxic air pollutants have potential to have an adverse impact on air and water quality if not properly handled. For example, mercury switches used in hood and trunk lighting can be recovered rather than being crushed. Auto dismantlers are regulated by the Department of Toxic Substance Control (CCR, Title 22).

Cold Ironing (Shore-side Power) — This process allows ships to run heating, air conditioning, lights and other operations by plugging into shore-side electrical power. This reduces emissions by allowing ships to shut down the uncontrolled auxiliary engines which traditionally have powered these electric-based activities. There are toxic air contaminants associated with incremental electricity generation at power plants, but they are significantly less than emissions generated by ship engines.

Consumer Products — The consumer products measures require reformulation to reduce VOC content. A number of VOCs currently used in consumer product formulations, such as ethylene-based glycol ethers, trichloroethylene (TCE), and toluene, have also been identified as toxic air contaminants. When a product is reformulated to meet new VOC limits, however, a manufacturer could use small amounts of a chemical, not used before, that may be a toxic air pollutant. This potential impact will need to be evaluated and mitigated as reformulation options are reviewed during the development of new VOC limits, as staff has done in previous rulemakings.

Two particular toxic air contaminants (TAC) used in some consumer products, methylene chloride (MeCl) and perchloroethylene (Perc), are specifically exempted from the VOC definition because of their very low ozone-forming capabilities. As a result, some manufacturers may choose to use MeCl or Perc in their reformulations to reduce the VOC content in meeting future limits. However, when setting new VOC limits, staff analyzes the potential use of non-VOC TACs as reformulation options to ensure protection of public health. To avoid increased use of non-VOC TACs, staff sets emissions standards that are commercially and technologically feasible without use of TACs or bans TACs in the category at hand. Staff has prohibited three TACs—MeCl, Perc, and TCE—in approximately 56 categories to date, and will consider prohibiting their use in other categories, if feasible.

Cleaner Main Ship Engines — Various technologies can be used to reduce NOx emissions from main ship engines such as low-NOx fuel injectors, delayed injection timing and technologies that add water vapor to the combustion chamber. Impacts associated with technologies include slight increases in PM,

hydrocarbons and CO2. Additionally, there may be increased PM levels associated with selective catalytic reduction.

Fuel Additives — Fuel additives or reformulation of fuels may provide possible emission reduction benefits. However, fuel additives or fuel reformulation may also create adverse emissions and environmental impacts. Before a fuel additive or fuel reformulation is implemented as an emission reduction strategy, a multimedia evaluation must be conducted under California Health and Safety Code Section 43830.8. This evaluation will assess the potential emission impact associated with any additive or fuel reformulation to the environment and public health.

Greenhouse Gases

Potentially significant greenhouse gas emissions could result from measures that may reduce fuel efficiency or increase energy use, and consumer product rules.

Diesel-Fueled Engines — Proposed measures to reduce emissions from diesel-fueled engines could require the use of new diesel engines, engine modifications, add-on control devices such as diesel particulate filters, oxidation catalysts and selective catalytic reduction (SCR) systems, low-sulfur diesel fuel, alternative fuel formulations, or other strategies. These strategies have the potential to slightly reduce fuel economy and increase greenhouse gas emissions. These impacts may be mitigated as other engine features become more efficient to meet air pollution emission standards and by reducing idling times for trucks and other mobile equipment.

Diesel Particulate Filters — *A* number of measures in the State Strategy would require the use of diesel particulate filters. These particulate filters must be periodically regenerated by burning off the accumulated carbon and associated hydrocarbons trapped on the filter. Active regeneration methods use external fuel or energy to heat the filter and regenerate it.

Cleaner Main Ship Engines — Various technologies can be used to retrofit main ship engines such as low-NOx fuel injectors, delayed injection timing and technologies that add water vapor to the combustion chamber. Impacts associated with technologies include slight increases in PM, hydrocarbons and CO_2. Additionally, there may be increased PM levels associated with selective catalytic reduction.

Consumer Products — Alternative compounds used to meet lower VOC limits in the State Strategy's consumer products measures could be greenhouse gases. For aerosol products to meet the VOC limits in the proposed regulations, manufacturers may choose to replace some or all of the typical hydrocarbon propellants, such as propane and butane, with the hydrofluorocarbons HFC-152a or HFC-134a, or carbon dioxide (CO_2), which are greenhouse gases. HFC-152a

and HFC-134a have no ozone depletion potential, do not contribute to the formation of ground-level ozone, are low in toxicity, and are less flammable. In addition, HFC-152a has the lowest global warming potential of all the HFCs and an atmospheric lifetime of only 1.5 years. While HFC-134a has significantly higher global warming potential than HFC-152a, its use is quite limited. Because HFC-134a has such low flammability, it is typically only used in consumer product applications where flammability is a significant concern. Due to the high cost of HFC-152a and HFC-134a (as much as five to seven times greater than other hydrocarbon propellants, such as propane and butance), it is anticipated that manufacturers will use as little HFC-152a or HFC-134a as possible when reformulating their aerosol products. Consequently, because these measures would not cause a significant increase in the use of HFC-152a or HFC-134a, there would be a negligible global warming impact. However, further analysis of the properties and effects of these HFCs is needed. If the analysis reveals significant impacts, ARB staff would reassess the control strategy. CO_2 used as a replacement for hydrocarbon propellants would be a recycled byproduct from existing processes and would not create an increase in global warming gases.

Stratospheric Ozone Depleting Pollutants

Consumer Products — Some hydrochlorofluorocarbons are still used in a very small number of consumer products as solvent. HCFC-22 is also used as a blowing agent in some foam insulation sealant products because of its low flammability. HCFCs are exempt VOCs under the existing and proposed regulations. It is unknown if there will be an increased use of these compounds in meeting lower VOC limits. However, all HCFCs are classified as group II ozone-depleting compounds by U.S. EPA and are scheduled for phase out by 2030. Because of the phase out, manufacturers are very likely to use blowing agents and solvents other than HCFCs. We therefore anticipate that the impact on ozone depletion due to HCFCs will be negligible.

Vehicle Retirement Program — Auto dismantlers that receive end-of-life vehicles with air conditioning systems must remove any refrigerant contained in these systems. During the removal of the refrigerant, there is potential for an incidental amount of refrigerant to escape into the atmosphere. Once the refrigerant is removed, it must be taken to a registered facility for proper handling.

III. Agricultural Resources

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on the agricultural resources of California. Ozone pollution causes significant crop yield loss in California. The State Strategy will help reduce ozone levels and consequently reduce crop loss resulting from ozone damage.
A discussion of potential environmental impacts associated Department of Pesticide Regulation's 2008 Pesticide Element is at the end of this section.

IV. Biological Resources

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on the biological resources of California. We believe that the proposed measures will improve air quality and consequently, will improve the habitat of our biological resources.

V. Cultural Resources

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on the cultural resources of California. We believe that the proposed measures will reduce ozone and acidic compounds in the air. Ozone, which causes oxidation, and airborne acids are both known to cause deterioration of archaeological, paleontological, and geological features.

VI. Energy Demand

Cumulative Impact: As energy demand increases as a result of the State Strategy, there is a potential for significant adverse environmental impacts. These impacts can be mitigated through energy conservation programs, using renewable energy sources, and designing engine control systems to maximize fuel efficiencies.

Several State Strategies involve electrification of equipment that could result in an increased demand for electricity most likely generated at power plants. In 2005, California produced 78 percent of its own electricity with the remainder imported. The total amount generated in-state came from natural gas (37.7%), coal (20%), large hydro-electric (17%), nuclear (14.4%) and renewable energy sources (10.7%). In addition to increased electricity usage, some measures would require engine control devices that can reduce fuel efficiencies resulting in more fuel being used.

Reformulated Gasoline — Ethanol has about 30 percent less energy by volume than gasoline, therefore increased ethanol in gasoline will decrease fuel economy by about 0.3 percent for each 1 percent of ethanol. Staff is investigating a change in the procedure for certifying alternate formulations of reformulated gasoline that will lead to an increase in the use of ethanol.

Cold Ironing (Shore-side Power) — This process allows ships to run heating, air conditioning, lights and other operations by plugging into shore-side electrical power. This reduces emissions by allowing ships to shut down the uncontrolled auxiliary engines which traditionally have powered these electric-based activities. This technology can significantly reduce emissions from ship engines, however, the trade off is an incremental increase in energy demand.

Electrification of Equipment — Electric forklifts, dockside electrical hookups for larger marine vessels, and other strategies may increase electricity demand from power plants. The increase in power production will have an incidental increase in emissions (primarily NOx) from power plants. Air district permitting programs are in place to limit these emission increases. Overall, emissions should decrease significantly as fuels such as diesel and propane are replaced by the much cleaner natural gas burned at power plants as well as including more renewable energy sources to the power mix.

Diesel Fueled Engines — Proposed measures to reduce emissions from diesel-fueled engines could require the use of new diesel engines, engine modifications, alternatively fueled engines, add-on control devices such as particulate filters and catalysts, low sulfur diesel fuel, alternative fuel formulations, or other strategies. These strategies have the potential to cause a small decrease in fuel economy. Fuel economy impacts may be mitigated as engine design improves and engines operate more efficiently.

Diesel Particulate Filters — *A* number of measures in the State Strategy would require the use of diesel particulate filters. These particulate filters must be periodically regenerated by burning off the accumulated carbon and associated hydrocarbons trapped on the filter. Active regeneration methods use external fuel or energy to heat the filter and regenerate it.

Low Sulfur Diesel Fuel — Low sulfur diesel fuel requires increased hydrotreating of crude oil to remove sulfur, which would require additional energy consumption.

VII. Geology/Soils

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on geology or soils.

VIII. Hazards and Hazardous Materials

Cumulative Impact: The purpose of the State Strategy is to help California attain the federal 8-hour ozone and PM2.5 standards. ARB's goal is to ensure that all individuals in California, especially children and the elderly, can live, work, and play in a healthy environment. Each of the measures in the State Strategy is intended to reduce the health risks from air pollution. The measures would reduce the pollutants that contribute to adverse health impacts, including: ozone, inhalable particles (including soot and dust), carbon monoxide, and toxic emissions (like particles emitted from diesel engines and benzene). There is a less than significant cumulative impact that would result from proposed measures.

Several State and federal agencies currently regulate hazardous and hazardous materials. A discussion of these regulations will follow State Strategy potential impacts.

Consumer Products — In meeting lower VOC limits, there is a slight potential that products may become more flammable if reformulation increases the use of highly flammable, exempt VOC solvents such as acetone and methyl acetate. This could be of concern in the manufacture, storage, shipping and end use of the reformulated products. In many instances, however, manufacturers can use other, less flammable, exempt solvents and/or water borne formulations. It should be noted that the VOCs that acetone often replaces are generally highly flammable as well. In addition, acetone is currently used in many consumer products without significant safety concerns. Further, the U.S. Department of Transportation requires that consumer products meet specific criteria to ensure that there are no significant safety concerns with transport and storage of the products.

Selective Catalytic Reduction (SCR) — Selective catalytic reduction is likely to be used on heavy-duty diesel engines to reduce NOx in the exhaust. Urea is the preferred reductant used to react with the NOx, in the presence of a catalyst, to form nitrogen gas and water. The use of ammonia as a reductant in motor vehicle-based SCR systems is very unlikely.

Fuel Additives and Reformulation — Before proposing rules requiring fuel reformulations, staff must conduct a multimedia evaluation as required under California Health and Safety Code Section 43830.8. This evaluation will assess the potential impact associated with any fuel reformulation to the environment and public health including worker exposure.

Diesel Particulate Filters — A number of measures in the State Strategy would require the use of diesel particulate filters. Some safety concerns include reduced visibility from the driver's seat due to new equipment mounted near eye level, particularly on off-road equipment such as bulldozers, backhoes, and tractors. ARB staff believes that proper engineering design can mitigate or eliminate these potential problems.

Diesel particulate filters must be regenerated by burning off the accumulated carbon and associated hydrocarbons trapped on the filter. Active regeneration methods use external fuel or energy to heat the filter and regenerate it. A slight potential exists for a runaway regeneration that could pose a fire hazard. Proper engineering design should mitigate or eliminate these potential risks. Diesel particulate filter measures will be written to assure that the design is proven effective.

Idling Inspections — Increased idling at inspection stops for heavy-duty diesel will expose people involved with or performing the inspections to toxic diesel PM emissions. Diesel engines emit a complex mix of pollutants, the most visible of which are very small carbon particles, or 'soot' known as diesel PM.

Power Plants — Increased energy required from power plants may be a source of localized releases of toxic air contaminants causing exposure to workers and nearby residents.

Hazardous Materials

Hazards are related to the risks of fire, explosions, or releases of hazardous substances in the event of accident or upset conditions. Hazards are thus related to the production, use, storage, and transport of hazardous materials. Industrial production and processing facilities are potential sites for hazardous materials. Examples of hazardous materials used by consumers include fuels, paints, paint thinner, nail polish, and solvents. Hazardous materials may be stored at facilities producing such materials and at facilities where hazardous materials are part of the production processes. Storage refers to the bulk handling of hazardous materials before and after they are transported to the general geographical area of use. Currently, hazardous materials are transported throughout California via all modes of transportation including rail, highway, water, air, and pipeline.

State law requires detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of to prevent or mitigate injury to health or the environment in the event that such materials are accidentally released. The Office of Emergency Services (OES) enforces these requirements. Federal laws, such as the Emergency Planning and Community-Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act or SARA) impose similar requirements.

The U.S. Department of Transportation (U.S. DOT) has regulatory responsibility for the safe transport of hazardous materials between states and to foreign countries. U.S. DOT regulations govern all means of transportation, except for those packages shipped by mail. Hazardous materials sent by U.S. mail are covered by U.S. Postal Service (USPS) regulations. Common carriers are licensed by the California Highway Patrol (CHP), pursuant to the California Vehicle Code, §32000. This section requires licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

The CHP and Caltrans have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. The CHP enforces hazardous materials and hazardous waste labeling and

packaging regulations that prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP also conducts regular inspections of licensed transporters to assure regulatory compliance.

Pursuant to the Emergency Services Act, California has developed an Emergency Response Plan to coordinate emergency services provided by federal, State, and local government agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by OES, which coordinates the responses of other agencies including U.S. EPA, CHP, Department of Fish and Game, the applicable regional water quality control board, and local fire departments (see California Government Code, §8550).

In addition, pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985 (the Business Plan Law), local agencies are required to develop area plans for response to releases of hazardous materials and wastes. These emergency response plans depend to a large extent on the business plans submitted by persons who handle hazardous materials. An area plan must include pre-emergency planning of procedures for emergency response, notification and coordination of affected government agencies and responsible parties, training, and follow-up. Hazardous materials incidents are reported to OES, which compiles and archives the information.

Public Health

The Toxic Air Contaminant Identification and Control Act (Health and Safety Code §§ 39650 *et seq*., Food and Agriculture Code Sections 14021 *et seq*.) established California's two-phased program to identify and control air toxics. In the first phase (risk assessment), ARB selects substances for review, considering criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community" (Health and Safety Code § 39666(f)). One example of an identified TAC is particulate matter from diesel-fueled engines.

In the risk management phase of the program, ARB reviews the emission sources of an identified TAC to determine if any regulatory action is necessary to reduce the risk. The analysis includes a review of controls already in place, the available technologies and associated costs for reducing emissions, and the associated risk.

Also in the risk management phase, ARB, working closely with the air districts, is responsible for developing control measures for all identified TACs except those used as pesticides. Pesticides are evaluated in a similar process by the

Department of Pesticide Regulation. Following ARB adoption of measures to control a specific toxic compound, the districts must adopt equal or more stringent regulations for the stationary sources in their jurisdiction. Regulations to control airborne toxic emissions from mobile sources are the responsibility of ARB.

The Air Toxics Hot Spots Program (Health and Safety Code §§ 44300-44384) requires facilities to report their toxic air emissions, ascertain health risks, and to notify nearby residents of significant risks. Facilities that pose a significant health risk to the community are required to reduce their risk through a risk management plan.

Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal/OSHA) and the Federal Occupational Safety and Health Administration (OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. Under the authority of the Occupational Safety and Health Act of 1970, OSHA has adopted numerous regulations pertaining to worker safety (contained in 29 CFR). These regulations set standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries. Some OSHA regulations contain standards relating to hazardous materials handling, including workplace conditions, employee protection requirements, first aid, and fire protection, as well as material handling and storage. Because California has a federally-approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace (detailed in CCR, Title 8) include requirements for employee safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations containing training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that Material Safety Data Sheets (MSDSs) be available to employees and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and emergency evacuation training).

Both federal and State laws include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. The training must include instruction in methods for the safe handling of hazardous materials, an explanation of MSDSs, use of emergency response

equipment and supplies, and an explanation of the building emergency response plan and procedures. Chemical safety information must also be available at the workplace. More detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eye washes, must also be kept in accessible places. Compliance with these regulations reduces the risk of accidents and adverse worker health effects.

The National Fire Code (NFC), Standard 45 (published by the National Fire Protection Association) contains standards for laboratories using chemicals that are not requirements but are generally employed by organizations in order to protect workers. These standards provide basic protection of life and property in laboratory work areas through prevention and control of fires and explosions, and also serve to protect personnel from exposure to non-fire health hazards. While NFC Standard 45 is regarded as a nationally recognized standard, the California Fire Code (24 CCR) contains State standards for the use and storage of hazardous materials and special standards for buildings where hazardous materials are found. Some of these regulations consist of amendments to NFC Standard 45. California Fire Code regulations require emergency pre-fire plans to include training programs in first aid, the use of fire equipment, and methods of evacuation.

IX. Land Use/Planning

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on land use and planning.

X. Mineral Resources

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on mineral resources.

XI. Noise

Cumulative Impact: The cumulative effect of the State Strategy will not have a potentially significant impact on noise, although an increase of the number of trucks idling at inspection stops may result in increased noise.

Diesel-Fueled Engines — The recommended measures to reduce emissions from diesel-fueled engines could require the use of add-on control devices such as particulate filters, oxidation catalysts and engine modifications. This could result in a potential increase in noise levels due to exhaust system changes to accommodate add-on controls. However, testing of current add-on controls has shown no increase in noise, and ARB staff does not expect future adverse noise impacts.

XII. Population and Housing

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on population and housing.

XIII. Public Services

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on public services.

XIV. Recreation

Cumulative Impact: The State Strategy is not expected to cause any adverse impacts on recreation. By reducing the number of days with unhealthy air quality, ARB expects that our parks and outdoor recreational facilities could see increased usage by children, the elderly, asthmatics, and others with sensitive airways or chronic breathing problems.

XV. Solid/Hazardous Waste

Cumulative Impact: The cumulative impact of all strategies in the State Strategy would be a small, but potentially significant, increase of both solid and hazardous wastes. To mitigate these impacts, ARB will work with the California Department of Toxic Substances Control (DTSC) and the California Integrated Waste Management Board (CIWMB) to reduce waste production in these and other areas.

State and local agencies currently regulate solid and hazardous waste. A discussion of these regulations will follow the proposed strategies below.

Vehicle Retirement Program — High-mileage and older vehicles are likely candidates for scrappage rendering them inoperable to pollute. There are many non-hazardous materials in a vehicle that could be discarded in landfills. Such materials include iron and aluminum engine blocks, steel and plastic from chasses and interiors, glass, chromium-containing bumpers, and rubber hoses. Mitigation for the expansion of this program would involve reusing or recycling the above mentioned materials. According to the Bureau of Automotive Repair, on average 90 percent of a scrapped vehicle is recycled with the remaining 10 percent considered fluff which is typically landfilled. A significant amount of scrap and recycled materials are shipped to foreign markets.

Diesel-Fueled Engines and Vehicles — The proposed measures to reduce emissions from diesel-fueled engines and vehicles could require the use of new diesel engines or add-on control devices such as particulate filters and oxidation catalysts. Potential adverse impacts include increased scrapping of diesel engines and vehicles, and impacts due to handling and disposal of collected

particulate matter. Also, diesel oxidation catalysts are considered hazardous at the end of life. The impact of accelerated vehicle scrapping can be largely mitigated by recycling and reclamation of hazardous materials.

Diesel Particulate Filters — A number of measures in the State Strategy would require use of diesel particulate filters. Diesel particulate filters will probably produce a small amount of waste ash for disposal. This waste is estimated at about 10 to 150 grams of ash per vehicle per year and is projected to be considered a hazardous material due to zinc content. While most larger maintenance facilities can be expected to handle, collect, and dispose of this material properly, it is less certain how smaller facilities will handle waste ash. The filters themselves will eventually also be retired. Some filters contain a precious metal catalyst that is valuable for recycling and reclaiming. Other spent filters may not be worth recycling and may be disposed of at a proper landfill. We do not expect that the spent filters themselves will be considered a hazardous material.

Electrification of Equipment — Electrification equipment can provide significant reductions of air pollutant emissions. However, electrification strategies may result in the production and use of a significant number of batteries. These batteries are normally recycled, and the recycle rate for lead-acid batteries is currently more than 95 percent. However, the increase in the number of spent batteries to be processed would potentially have significant impacts on the recycling industry and on the disposal system for non-recyclable materials. Leasing, deposit, or rebate programs for electric batteries could be required to increase recycling. A spent battery exchange for battery replacement could also reduce waste impacts. With these mitigation measures in place, battery disposal impacts should not be significant.

Solid Waste Regulations

Solid waste consists of residential wastes (garbage and rubbish produced by households), construction wastes, commercial and industrial wastes, home appliances and abandoned vehicles, and sludge residues (waste remaining at the end of the sewage treatment process). CCR Title 14, Division 7, provides the State standards for the management of facilities that handle and/or dispose of solid waste. CCR Title 14, Division 7, is administered by the CIWMB and the designated Local Enforcement Agency (LEA). The designated LEA for each county is the County Department of Environmental Health.

CCR Title 14, Division 7, establishes general standards to provide required levels of performance for facilities that handle and/or dispose of solid waste. Other Title 14 requirements include operational plans, closure plans, and post-closure monitoring and maintenance plans. Title 14 covers various solid waste facilities including, but not limited to landfills, material recovery facilities (MRF), transfer stations, and composting facilities.

Hazardous Waste Regulations

Hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. As defined in CCR Title 22, Division 4.5, Chapter 11, Article 3, hazardous materials are grouped into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials) and reactive (causes explosions or generates toxic gases). A hazardous waste is any hazardous material that is discarded, abandoned, or otherwise is not recycled. If improperly handled, hazardous materials and wastes can result in public health hazards if released to the soil or groundwater or through airborne releases in vapors, fumes, or dust.

Under the Resource Conservation and Recovery Act (RCRA), U.S. EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the concept of regulating hazardous wastes from generation through disposal. HSWA specifically prohibits the use of certain techniques for the disposal of some types of hazardous wastes. Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as the federal RCRA requirements. U.S. EPA approved California's program to implement federal regulations as of August 1, 1992.

DTSC administers the Hazardous Waste Control Law (HWCL). Under HWCL, DTSC has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes. HWCL differs little from RCRA; both laws impose "cradle to grave" regulatory systems for handling hazardous wastes in a manner that protects human health and the environment. Regulations implementing HWCL are generally more stringent than regulations implementing RCRA. HWCL regulations list more than 780 hazardous chemicals, as well as nearly 30 more common materials that may be hazardous, and establish criteria for identifying, packaging, and labeling hazardous wastes. They prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Under both RCRA and HWCL, hazardous waste manifests must be retained by the generator for a minimum of three years. Hazardous waste manifests list a description of the waste, its intended destination, and regulatory information about the waste. A copy of each manifest must be filed with DTSC. The generator must match copies of hazardous waste manifests with certification notices from the treatment, disposal, or recycling facility. Hazardous waste as

defined in the Code of Federal Regulations Title 40 (40 CFR) 261.20 and CCR Title 22, Article 9 (including listed substances, 40 CFR 261.30) is disposed of in Class I landfills. California has enacted strict legislation for regulating Class I landfills (Health and Safety Code, §§25209 - 25209.7). For example, the treatment zone of a Class I landfill must not extend more than five feet below the initial surface and the base of the zone must be a minimum of five feet above the highest anticipated elevation of underlying groundwater (Health and Safety Code, §25209.1(h)). The Health and Safety Code also requires Class I landfills to be equipped with liners, a leachate collection and removal system, and a groundwater monitoring system (Health and Safety Code, §25209.2(a)). Such systems must meet the requirements of DTSC and the SWRCB (Health and Safety Code, §25209.5).

XVI. Transportation and Traffic

Cumulative Impact: Modernization of motor vehicle fleets has the potential to generate increased travel. Because newer vehicles tend to be driven more frequently and make longer trips, this could increase the number of vehicles on the roads. Although modernization and turnover of fleets is intended to decrease the emissions from these vehicles, more vehicles on the roads could result in increased congestion.

XVII. Water Resources

Cumulative Impact: The State Strategy would significantly reduce a number of air pollutants and the reductions in deposition will improve overall water quality in California. Also, accelerated retirement of older equipment with potentially leaky gasoline or diesel engines will reduce fluid (oil and grease) drips, resulting in cleaner storm water runoff. Several potentially significant adverse water quality impacts are identified, including impacts from reformulated gasoline and reformulated low-VOC consumer products.

Although rain can effectively scrub the air clean, air pollutants absorbed by rainwater can have an adverse impact when deposited into surface waters. NOx and SOx emissions can form acids that can lower the pH of sensitive mountain lakes and streams and adversely affect the flora and fauna. NOx emissions can oxidize to nitrate, a powerful fertilizer, and can spur algae growth contributing to lake water turbidity and algae blooms. Organic molecules can be deposited in surface waters and affect the aquatic plants and animals. Toxic air contaminants (TACs) can dissolve in rain and eventually stress or kill organisms.

This environmental analysis of water resources is divided into two major categories—water quality and water demand. However, no significant negative impacts on water demand were identified. Several State and federal agencies regulate water resources and water quality. A discussion of these agencies' regulations will follow the State Strategy potential impacts.

Reformulated Gasoline — Ethanol in Gasoline
Since the phase out of MTBE from California gasoline formulations and federal denial of a request for a waiver from the oxygenate requirement, California has reformulated its gasoline with ethanol. As modifications to the rule are developed, there may be an increase of the amount of ethanol used as an oxygenate. There is potential for biological effects from this formulation in the event there is discharge to groundwater or surface waters. Ethanol may have an impact on the biodegradation of hydrocarbons which can worsen the effects of a gasoline spill. Ethanol may inhibit biological degradation of Benzene, Toluene, EthylBenzene and Xylene (BTEX) due to bacterial preference for ethanol resulting in longer groundwater plumes of BTEX.

Diesel-Fueled Engines — The State Strategy to reduce emissions from on-road, off-road, and stationary diesel-fueled engines could require or encourage the use of alternatively fueled engines and alternative fuel formulations. Because some alternative diesel fuel formulations and additives could more readily dissolve in water, these control measures have the potential to adversely impact local ground and surface waters.

The use of these alternative fuels is not expected to result in significantly greater adverse water quality impacts than the use of regular diesel fuels. A number of rules and regulations are currently in place to minimize the potential impacts from underground leaking storage tanks and spills from fueling activities. These include requirements for the construction of the storage tanks, requirements for double containment, and installation of leak detection systems. These regulations minimize the potential for additional leaks from the use of diesel fuels or alternative fuels.

Consumer Products — Two toxic air contaminants (TAC) used in some consumer products, methylene chloride (MeCl) and perchloroethylene (Perc), are specifically exempted from the VOC definition in recognition of their very low ozone-forming capabilities. Some manufacturers could use MeCl or Perc in their formulations to reduce the VOC content to meet future limits, creating potential adverse environmental impacts for primarily air, and possibly, though much less likely, soil and water.

ARB staff has recognized the potential for increased use of TACs in consumer products and has taken steps to mitigate and limit the use of these compounds in recent Board actions. These actions include: the toxics control measure for automotive maintenance and repair activities; aerosol adhesives limits in the consumer products regulation; the prohibition of para-dichlorobenzene in solid air fresheners and toilet/urinal care products; and reactivity limits in the aerosol coating regulations. ARB periodically surveys all categories for their chemical composition including TACs and also tracks the use of MeCl and Perc in regulated consumer products through yearly manufacturer reporting requirements. Further, ARB staff has proposed VOC limits in the past that were

achievable without the increased use of TACs. Furthermore, Proposition 65 labeling requirements discourage manufacturers from reformulating consumer products with TACs.

ARB staff actively seeks to prevent increased use of TACs when setting new VOC limits. In the future, if new products contain Perc and MeCl, ARB staff will monitor their use and limit or prohibit their use in additional consumer products, when applicable. Mitigation measures will be implemented if a significant presence of consumer product-related Perc is anticipated in wastewater.

Vehicle Retirement Program — High-mileage and older vehicles are likely candidates for scrappage. Their deterioration leads to increased emissions. Once scrapped, they can no longer pollute. Scrapped vehicles commonly contain residual fuels, such as gasoline, lubricating oils and other fluids that may potentially harm water quality if not properly handled. There are regulations and rules to properly manage these programs, however, there is a potential for adverse environmental impacts if these pollutants are leaked to surface and groundwater.

State and Regional Water Boards

California has an extensive regulatory program to control water pollution. The most important statute governing water quality is the Porter-Cologne Act, which gives the State Water Resources Control Board (SWRCB) and the nine regional water quality control boards (RWQCB) broad powers to protect surface and groundwater supplies in California, regulate waste disposal, and require cleanup of hazardous conditions (California Water Code §§3000-13999.16). In particular, the SWRCB establishes water-related policies and approves water quality control plans, which are implemented and enforced by the RWQCBs. The nine regional boards include: North Coast, San Francisco Bay, Central Coast, Los Angeles, Central Valley, Lahontan, Colorado River Basin, Santa Ana, and San Diego.

It is the responsibility of each regional board to prepare water quality control plans to protect surface and groundwater supplies within its region. These plans must: identify important regional water resources and their beneficial uses, such as domestic, navigational, agricultural, industrial, and recreational; establish water quality objectives, limits, or levels of water constituents or characteristics established for beneficial uses and to prevent nuisances; and present an implementation program necessary to achieve those water quality objectives. These plans also contain technical information for determining waste water discharge requirements and taking enforcement actions. The plans are typically reviewed and updated every three years (California Water Code §13241).

California dischargers of waste that “could affect the quality of the waters of the State” are required to file a report of waste discharge with the appropriate regional water board (California Water Code §13260). The report is essentially a

permit application and must contain information required by the regional board. After receipt of a discharge report, the regional board will issue "waste discharge requirements" analogous to a permit with conditions prescribing the allowable nature of the proposed discharge (California Water Code §§3263, 13377, and 13378).

National Pollutant Discharge Elimination System Requirements

Most discharges into California's waters are regulated by the National Pollutant Discharge Elimination System (NPDES), a regulatory program under the federal Clean Water Act. The NPDES is supervised by U.S. EPA, but administered by the SWRCB. NPDES requirements apply to discharges of pollutants into navigable waters from a point source, discharges of dredged or fill material into navigable waters, and the disposal of sewage sludge that could result in pollutants entering navigable waters. California has received U.S. EPA approval of its NPDES program. Pursuant to California's NPDES program, any waste discharger subject to the NPDES program must obtain an NPDES permit from the appropriate RWQCB. The permits typically include criteria and water quality objectives for a wide range of constituents. The NPDES program is self-monitoring, requiring periodic effluent sampling. Permit compliance is assessed monthly by the local RWQCB. Any NPDES violations are then categorized and reported to U.S. EPA on a quarterly basis.

U.S. EPA has also published regulations that require certain industries, cities and counties to obtain NPDES permits for stormwater discharges [55 CFR (1990)]. The regulations set permit application requirements for classes of stormwater discharges specifically identified in the federal Clean Water Act. The regulated stormwater discharges include those associated with industrial activity and from municipal storm sewer systems serving a population of 100,000 or more.

Discharges to Publicly-Owned Treatment Works (POTWs)

Water discharges to a public sewage system (referred to generically as a POTW), rather than directly to the environment, are not subject to the NPDES discharge requirements. Instead, such discharges are subject to federal pretreatment requirements under §§307(b) and (c) of the Clean Water Act [33 USC §1317(b)-(c)]. Although these pretreatment standards are enforced directly by U.S. EPA, they are implemented by local sanitation districts (Monahan *et al.*, 1993). The discharger, however, has the responsibility to ensure that the waste stream complies with the pretreatment requirements of the local system. Any facility using air pollution control equipment affecting water quality must receive a permit to operate from the local sanitation district. In cases where facilities modify their equipment or install air pollution controls that generate or alter existing wastewater streams, owner/operators must notify the local sanitation district and request that their existing permit be reviewed and modified.

To ensure compliance with wastewater pretreatment regulations, local sanitation districts sample and analyze the wastewater streams from facilities approximately two to four times per year. Persons who violate California's water quality laws are subject to a wide array of enforcement provisions. In 1990, U.S. EPA revised and extended existing regulations to further regulate hazardous waste dischargers and require effluent testing by POTWs. To comply with revised permit limits, POTWs may alter their operations or impose more stringent local limits on industrial user discharges of hazardous wastes (Monahan *et al*., 1993). POTWs in California are operated by sanitation districts that adopt ordinances establishing permit systems and fee structures.

Department of Pesticide Regulation's 2008 Pesticide Element

The pesticide element requires the Department of Pesticide Regulation (DPR) to implement regulations that restrict the amount of VOCs that may be emitted from field fumigation. The 2008 element updates the current pesticide element of the ozone SIP, which provides for percentage reductions in emissions from 1990 levels.

An analysis of potentially significant environmental effects will occur before final implementation of the specific field fumigant regulations. The fumigant regulations have been developed enough to assess the potential environmental impacts at this point.

Cumulative Impact of 2008 Pesticide Element: Adoption of this element into the SIP would not have significant or potentially significant adverse effects on the environment.

Potential Environmental Impacts of 2008 Fumigant Regulations

The fumigant regulations to be implemented in 2008 will establish limits on the amount of VOCs that may be emitted from field fumigation in certain areas and will prescribe allowable application methods statewide. Pesticide applicators are expected to take one or more of the following actions to comply with the regulations: Use lower emission application methods, reduce application rates, reduce the acres fumigated, and shift fumigant applications outside the peak ozone season. DPR expects most of the required emission reductions to come through use of lower emission application methods, generally tarping, post-fumigation water treatments, and drip chemigation. The regulations will give applicators a choice of application methods, but in general the impacts will be negligible regardless of which options are selected.

DPR's review of the proposed action showed that no significant adverse environmental impact to California's environment can reasonably be expected to occur from implementing its commitment to promulgate fumigation regulations.

In reaching this conclusion, DPR considered the possible impacts discussed below.

Air Quality

Shifting fumigations outside the peak ozone season could cause current particulate emissions from tractors and other application equipment to shift from summer to late fall or early spring. However, increased fumigations and associated particulate emissions during the winter peak particulate season are unlikely due to wet fields and other constraints.

Since the 2008 fumigant regulation would establish application limits during May through October only, there is a potential for an increased use of fumigants in the months preceding or following the peak ozone season. However, current DPR regulations and U.S. EPA label restrictions are designed to prevent acute or chronic toxic exposure and are sufficient to avoid any adverse effects of toxic emissions from any increased use of fumigants.

In addition, the restriction of allowable application methods in the proposed regulations will reduce air emissions of the fumigants. Emissions of fumigants included in the proposed regulation have little or no contribution to particulate matter pollution, acid rain, climate change, or other air quality impacts.

Agricultural Resources

Reducing the acreage fumigated would cause the previously fumigated fields to be converted to crops that do not use fumigants or to non-agricultural uses. The most likely conversions in specific areas are unknown at this time. DPR expects that growers in all areas can, and will, meet the emission limits primarily through changing application methods, and thus the regulations will not cause a significant reduction in the number of acres fumigated or conversion of agricultural land to other uses.

Resource/Energy Use

Post-fumigation water treatments and drip chemigation (pesticide application via an irrigation system rather than by tractor application) will require greater quantities of water, with associated energy use and other effects. Less diesel fuel and other desirable effects associated with decreased tractor use will offset any potential impacts. However, the relative increase from current water use is expected to be negligible.

Solid Waste

The disposal of solid waste may increase slightly due to use of plastic tarpaulins under the proposed regulations, but the increase is not expected to be significant

since a great majority of the fumigations already use tarpaulins when it is a feasible mitigation measure.

Water Quality

DPR's evaluation of the post-fumigation water treatments and drip chemigation applications show virtually no potential for ground water contamination by the fumigants with the estimated irrigation increases.

Other

Fumigation is primarily used to control diseases and nematodes. If fumigant application rates are reduced as a result of the regulations, use of non-fumigant pesticides, such as fungicides and nematicides could be increased. Increasing the use of such non-fumigant pesticides may result in potential adverse environmental impacts to soil, air or water.

Environmental Analysis for the Proposed Revision to the Pesticide Commitment in the 1994 Ozone SIP

Aside from the Ventura area, the 2008 pesticide element requires the same or more VOC reductions than the current pesticide element (1994 Plan). The 2008 pesticide element does, however, allow less VOC reductions for pesticide use in the Ventura area only. Either plan would provide for significant reductions from actual, current levels. For Ventura County to meet the targets of the 1994 Plan, 2.2 tons per day reductions are required. The 2008 pesticide element would require a 1.2 ton per day reduction that would result from the 2008 fumigation regulations. The additional ton of VOC reductions needed to satisfy the 1994 SIP commitment will instead come from other sources of VOCs in the Ventura area. A more detailed discussion of this allowance and emission reduction offsets is included in the Appendix H.

Potential environmental impacts resulting from the proposed revision to the 1994 Plan may come from the use of methyl bromide and methyl isothiocyanate-generating fumigants. These fumigants comprise approximately 50 percent of the pesticide VOC inventory in Ventura. These two fumigants have very low reactivity, indicating that they do not appreciably contribute to ozone formation. Methyl bromide is an ozone depleting substance, and its production and importation are regulated under the Clean Air Act. Ozone depletion is not a localized effect, and the amount of methyl bromide emitted due to this Plan is negligible. It is estimated that 0.5 tons per day more methyl bromide will be emitted from field fumigation under the 2008 pesticide element target than would be allowed under the 1994 Plan. This is approximately 0.0002 percent of the worldwide methyl bromide emissions. No other adverse effects should occur because the fumigants included in the proposed regulation have little or no

contribution to particulate matter pollution, acid rain, climate change, or other air quality impacts.

DPR regulations and U.S. EPA label restrictions currently in place are designed to prevent acute or chronic toxic exposure. They are sufficient to avoid adverse effects of toxic emissions from any additional use of these fumigants that would result if the VOC reduction targets in the pesticide element of the SIP were one ton per day higher in Ventura in 2008.

Cumulative Impact of Proposed Revision to the 1994 Plan: The change to the 2008 pesticide element targets will not have a significant adverse environmental impact on air quality.

Cumulative Impacts of State Measures and Local District Measures

The cumulative impacts of the State Strategy within each impact area have been discussed in the previous sections. This analysis does not set forth the environmental impacts of measures contained in district plans, as districts are required to perform their own environmental analysis of their stationary source control measures. The 8-hour Ozone and PM2.5 SIP, however, will incorporate both state and local measures. Local measures from the non-attainment areas may also have adverse environmental impacts. Interested parties that want to review and assess impacts associated with each district should do so at the district level. ARB, as the state agency responsible for preparing the SIP, coordinating district efforts to comply with federal SIP requirements and forwarding the SIP components to U.S. EPA, will collect and compile the each district's plan, along with their environmental documentation, and send the entire SIP package to U.S. EPA.

At this time, the air districts with the most serious air quality problems in the State, South Coast Air Basin and the San Joaquin Valley, both have performed environmental analyses for their plans. All other non-attainment districts are expected to perform environmental analyses prior to adoption by their respective district boards.

The cumulative impacts discussion contained in the South Coast Air Quality Management District's Draft Environmental Impact Report (EIR) for the 2007 Air Quality Management Plan, is hereby incorporated by reference. The San Joaquin Valley Unified Air Pollution Control District Initial Study/Proposed Negative Declaration is also hereby incorporated by reference.

Project Alternatives

As discussed at the beginning of this appendix, ARB meets the criteria for a Certified State Regulatory Program. This certification requires ARB to present a range of reasonable alternatives for any project under consideration. CEQA requires a certified agency to include one of the following in the document: 1) Alternatives to the activity and mitigation measures to avoid or reduce any significant or potentially significant effects that the project might have on the environment; or 2) A statement that the agency's review of the project showed that the project would not have any significant or potentially significant effects on the environment, and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. The statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion. (CEQA Guidelines Section 15252).

The alternatives presented in this appendix were evaluated for their comparative merits to the proposed project. Under CEQA, the alternatives are required to feasibly obtain the objectives of the proposed project. For this reason, it is important to note the State of California is under legal obligation to prepare a State Implementation Plan which demonstrates it will reach attainment for the 8-hour ozone and PM2.5 standards.

Review of the cumulative impacts from all proposed new measures or strategies shows there may be potentially significant adverse impacts if all measures are adopted. Therefore, alternatives to the State Strategy are considered below.

Alternative 1 — No Project

CEQA documents typically assume that the adoption of a 'no project' alternative would result in no further action on the part of the project proponent or lead agency. For example, in the case of a proposed housing development project, adopting the 'no project' alternative terminates further consideration of that housing development or any housing development alternative identified in the associated CEQA document. In that case, the existing setting would remain unchanged.

One interpretation of the 'no project' alternative is that if this alternative was selected, all the measures in the State Strategy are rejected. Since the State Strategy contains all currently known feasible State strategies or measures that ARB could potentially take to reduce ozone-forming emissions, this would mean that no additional measures on existing sources or measures on uncontrolled sources would be developed. The result would be the eventual deterioration of California air quality as population increases and would very likely prevent the State from being able to meet its requirement to meet the 8-hour ozone and PM2.5 standards. In addition, California would fail to meet federal Clean Air Act

mandates and would be subject to federal sanctions. Water quality would suffer as acidic rain increases and toxic air contaminants are deposited on the ground. Public exposure to toxic materials would increase. Higher levels of air pollutants would deteriorate aesthetics by increasing haze and would damage crops. Only modest benefits would be achieved from a no project alternatives, such as any small increase in solid or hazardous waste would not be generated.

Alternative 2 — Adopt Fewer Measures

As mentioned previously, the State Strategy contains all measures to reduce ozone that ARB staff has determined are feasible to achieve. Instead of adopting all of these measures, ARB could adopt only some of them, although there would be numerous alternative subsets of the measures identified in the State Strategy to consider. However, adopting fewer measures would not result in the expected emissions reductions needed to meet the 8-hour ozone and PM2.5 standards. This would then place an increased responsibility on local districts and the federal government to achieve sufficient emissions reductions to meet the standard.

Alternative 3 — Adopt Measures with Different Emission Standards

For each individual measure, many alternatives exist for various levels of control and variable emission standards for the regulated sources. It is not possible to examine these many alternatives in detail without engaging in speculation, because the measures ultimately adopted by ARB will depend on the information that is learned in the future during the regulatory development process. In general, however, ARB staff believes that it will be necessary to adopt all State Strategy measures and emission standards that are determined to be feasible, rather than a subset of feasible measures and standards. To attain the federal ozone standard in the South Coast and San Joaquin Valley, significant additional emission reductions will be needed beyond the defined measures specifically identified in the Strategy. Therefore, failing to adopt all feasible measures and emission standards would result in failure to meet federal Clean Air Act mandates and would subject the State to federal sanctions.

Impacts of Individual Proposed Measures

The measures in the State Strategy will help make progress toward our goal of healthy air for all Californians. Each of the defined State measures was evaluated to identify adverse environmental impacts. The following table lists each of the measures, any potentially significant environmental impacts, and possible mitigation strategies

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
PASSENGER VEHICLES		
Expanded Passenger Vehicle Retirement: Increase the number of vehicles in the BAR scrappage program.	Air: Potential for incidental refrigerant leaks from air conditioning systems when attaching equipment to facilitate removal of the refrigerant. Solid/Hazardous Waste: Lead, chromium, and mercury in vehicles can become toxic air contaminants and pose health risks to facility workers. Solid/Hazardous Waste: Increased scrappage including steel, plastics and other materials that could potentially be disposed in landfills. Water: Fuel, oil, and lubricants may leak and disperse into groundwater. If improperly disposed, elements including lead, chromium and mercury can disperse into ground or surface water as part of landfill leachate.	Ensure best management practices are used by industry. Promote recovery and reclamation of hazardous wastes. Promote reuse and recycling of parts and scrapped materials. Proper facility management and adherence to regulations regarding the collection of fluids for recovery.
Modification of Reformulated Gasoline Program: Modify California's Reformulated Gasoline Program to offset ROG emissions due to the increased use of ethanol as an additive.	Energy: Ethanol blends have about 30 percent less energy by volume than gasoline, so increased ethanol in gasoline will decrease fuel economy by about 0.3 percent for each 1 percent of ethanol.	Manufacturers may be required to use more robust fuel systems on new motor vehicles, although increased fuel permeation from older model year vehicles would not be addressed.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
	Water: Ethanol reduces electron-acceptors in groundwater and reduces biodegradation of benzene, toluene, ethylbenzene, and xylene contained in gasoline. Potential for increase of groundwater plumes.	None identified.
Smog Check Improvements		
Low Pressure Evaporative Test: Require testing and repair of evaporative system leaks for all vehicles subject to Smog Check inspection.	Solid/Hazardous Waste: Increased disposal of faulty emission control parts.	Recycle fuel tank, fuel lines and/or catalyst when feasible.
More Stringent Cutpoints: Set more stringent Smog Check pass/fail cutpoints.	Solid/Hazardous Waste: Increased disposal of faulty emission control parts.	Recycle fuel tank, fuel lines and/or catalyst when feasible.
Annual Inspections of Older Vehicles: Inspect annually rather than every two years.	Solid/Hazardous Waste: Increased scrappage, disposal and repair of faulty emission control parts.	Promote reuse and/or recycling of parts and scrapped materials.
Annual Inspections for High Annual Mileage Vehicles: Inspect annually rather than every two years.	Solid/Hazardous Waste: Increased scrappage, disposal and repair of faulty emission control parts.	Promote reuse and/or recycling of parts and scrapped materials.
Add Visible Smoke Test: Include in the Smog Check test a visible smoke test to identify vehicles with excess PM emissions.	Solid/Hazardous Waste: Increased scrappage, disposal and repair of faulty emission control parts.	Promote reuse and/or recycling of parts and scrapped materials.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
Inspection of Light- and Medium-Duty Diesels: Include light- and medium-duty diesel vehicles in Smog Check to improve maintenance and reduce emissions. Repair poorly maintained or old emission systems.	Solid/Hazardous Waste: Increased scrappage, disposal and repair of faulty emission control parts.	Promote reuse and/or recycling of parts and scrapped materials.
Inspection of Motorcycles: Include motorcycle inspections as part of Smog Check.	Solid/Hazardous Waste: Increased disposal of faulty emission control parts.	Promote reuse and/or recycling of parts and scrapped materials.
TRUCKS		
Cleaner In-Use Heavy-Duty Trucks: Reduce excess emissions attributable to engine deterioration, poor maintenance, or tampering. Conduct visual, under-the-hood inspections of the emission control devices.	Air: Use of Diesel Particulate Filters (DPFs) may accelerate conversion of nitric oxide (NO) to nitrogen dioxide (NO_2). Air: Potential to increase ozone concentration, nitric acid, and secondary particulate matter formation. Air: Metals from various forms of catalyzed aftertreatment systems can be eroded and emitted as airborne PM, such as vanadium pentoxide from SCR. Air: Idling while waiting to be tested or while being tested could slightly increase all emissions. Air: Other secondary emissions are likely to include organonitrogen compounds, many of which are listed as TACs and are carcinogenic.	Design DPF systems to limit NO to NO_2 conversion rates. Design system to maximize efficiency. Ban use of potentially hazardous metals and deploy alternative catalyst formulations (e.g., zeolites) which don't contain vanadium. Design system to maximize efficiencies. Deploy alternative catalyst formulations which minimize emissions of organonitrogen compounds. Continue research to

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
(continued) Cleaner In-Use Heavy-Duty Trucks	Energy: Active regeneration of DPFs may include using external fuel or energy to burn off accumulated carbon and associated hydrocarbons trapped on filter. Energy: Maintaining the integrity of the add-on controls could extend the time period for the decrease in fuel economy. Hazards/Hazardous Materials: Increased idling at inspection stops has potential to expose anyone nearby to increased toxic diesel PM emissions. Noise: Increased number of trucks and idling at inspection stops could cause an increase in noise. Solid/Hazardous Waste: Waste ash from DPFs containing zinc may be generated. Solid/Hazardous Waste: Focus of measure is to maintain and repair devices, not replace them. If they are replaced, they may be sent to landfills. Transportation/Traffic: Existing roadside inspection program will likely be expanded and increase the number of locations where trucks will be pulled over and tested.	assess deployment of SCR and potential emission impacts. Promote energy conservation though effect of DPFs is expected to be negligible. Design system to maximize efficiency. Locate inspection stops with a buffer zone between the stop and sensitive receptors. Locate inspection stops in areas with a buffer zone between the stop and sensitive receptors. Promote recycling, reuse and waste management strategies at scrappage/maintenance centers. None required. Impact is not expected to have any significant impact on traffic and would not require mitigation.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
GOODS MOVEMENT		
Clean Up Existing Commercial Harbor Craft: Reduce emissions by replacing or retrofitting old engines.	Air: Increased levels of NO_2 affecting ozone and secondary nitrate formation and nitric acid. May enhance formation of sulfates. Air: Selective catalytic reduction (SCR) of diesel exhaust using urea injection may increase ammonia emissions. Air: Reduction of fuel efficiency due to exhaust backpressures may require more fuel use resulting in increased CO_2 emissions. Energy: Retrofitting post-combustion controls on engines may result in increased fuel use. Hazards/Hazardous Materials: Use of additives in diesel fuel or the use of alternative diesel fuels may create new hazards or enhance the hazard of diesel fuel. Solid/Hazardous Waste: Waste ash from DPFs containing zinc may be generated. Scrappage of older engines and their components. Water: Emulsified diesel fuel or fuel additives may increase soluble components in surface and sub-surface water that could result from spillage and leakage from storage tanks.	Use low-sulfur fuels. Adjust urea injection rates to near-stoichiometric proportions with respect to NOx mass flow rates. Design system to maximize efficiencies. Design system to maximize efficiencies. Any reformulation of diesel fuel or the requirement for additives will be reviewed under a multimedia evaluation. Mitigation measures will be identified under that process. Promote reclamation and recycling of materials. Require spill prevention plan and safe storage practices.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
Auxiliary Ship Engine Cold Ironing and Other Clean Technology: Reduce emissions from ships at berth with at-dock technologies such as cold ironing (electrical power) and other clean technologies.	Air: Localized release of criteria pollutants and toxic air contaminants from power plants. Energy: Increased energy demand for shore-side power. Solid/Hazardous Waste: Emission filters may capture more emissions and require disposal of hazardous ash.	Promote use of renewable energy sources. Promote use of renewable energy and adopt stricter stationary source controls. Ensure proper disposal of any hazardous materials generated.
Cleaner Main Ship Engines and Fuels: Further reduce emissions from main engines through added retrofits such as selected catalytic reduction. Support efforts to accelerate use of cleaner ships and rebuilt engines. Require ships to use low sulfur diesel fuel in main engines.	Air: SCR could increase releases of ammonia. Air: Diesel oxidation catalyst could form sulfates at higher temperatures. Air: Technologies such as low-NOx fuel injection, delayed injection timing and water vapor added to combustion chamber can cause slight increases in PM, hydrocarbons and CO2. Air: Distillation of heavy fuels can increase CO2 emissions at refineries. Solid/Hazardous Waste: Diesel oxidation catalysts which contain platinum are considered hazardous at end of life.	Promote catalyst recycling. Use low sulfur diesel. Design systems to maximize efficiencies. Air district permitting programs must evaluate and mitigate any air quality impacts to the extent feasible. Promote reclamation of metals from DOCs.
Port Truck Modernization: Retrofit or replace older heavy-duty diesel trucks that	Air: Use of Diesel Particulate Filters (DPFs) may accelerate conversion of nitrous oxide (NO) to	Design DPF systems to limit NO to NO_2 conversion rates.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
service ports.	nitrogen dioxide (NO_2). Potential to increase ozone concentration, nitric acid, and secondary particulate matter formation. Energy: Increased use of fuel or energy for active regeneration of DPFs. Solid/Hazardous Waste: Waste ash from DPF containing zinc may be generated.	Use renewable energy sources. Promote reclamation of metals.
Locomotive Engines: Accelerate the introduction of cleaner line haul engines (Tiers 2.5 & 3) and concurrently rebuild older engines to cleaner standards using exhaust after treatment devices.	Air: NOx would be slightly higher, and the SCRs would require urea. This could increase ammonia slip. Air: NO_2 fraction may be increased with DPFs, total NO_X remains approximately the same. Air: SO_X could increase at higher temperatures as well as NO_2. Energy: Diesel particulate filters, diesel oxidation catalysts, and SCRs can decrease fuel efficiency due to pressure loss and regeneration issues. After treatment technology would have the potential to reduce fuel efficiency. Hazards/Hazardous Materials: Possible high levels of zinc in DPF ash would need to be handled properly. Solid/Hazardous Waste: DPF's will need to be disposed of once removed. Depending on catalytic material used during manufacturing, DOCs could become hazardous waste when they are removed.	Design control systems to keep the exhaust temperatures within an optimum range so urea is fully utilized. None identified. Use ultra low-sulfur diesel fuel. Adjust urea injection rates to near-stoichiometric proportions with respect to NOx mass flow rates. Install ammonia slip catalysts. Promote reclamation and recovery of materials. Maintain the after treatment technology in proper and clean working order on a regular schedule. Ensure technology uses nonhazardous manufacturing material.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
CONSTRUCTION AND OTHER EQUIPMENT		
Cleaner In-Use Off-Road Equipment: Establish fleet average emission limits for construction fleets requiring older engines be retrofitted or replaced with cleaner engines.	Air: Diesel particulate filters, lean NOx catalysts and SCRs may have slight fuel economy penalty causing increase in CO_2 emissions. Air: Diesel oxidation catalysts may form sulfates at high temperatures. Air: Diesel particulate filters may increase NO_2 portion of NOx emissions. Air: Increased ammonia emissions from SCRs. Air: Secondary emissions from SCR are likely to include organonitrogen compounds, many of which are listed as TACs and are carcinogenic. Energy: Diesel particulate filters may require electricity to regenerate the filter. Hazards/Hazardous Materials: Metals from various forms of catalyzed aftertreatment systems can be eroded and bleed out into the environment, e.g., vanadium pentoxide from SCR. Solid/Hazardous Waste:Engines that are replaced through repowering could be sent to a landfill.	Design system to maximize efficiency. Use low sulfur diesel fuel (15ppm) to minimize sulfate emissions. Use filters meeting ARB's cap of 20 percent NO_2 to NOx emission ratio. Use an ammonia slip catalyst downstream of SCR catalyst to oxidize ammonia. Deploy alternative catalyst formulations which minimize emissions of organonitrogen compounds. Promote conservation and use of renewable energy sources. Ban use of potentially hazardous metals and deploy alternative catalyst formulations (e.g., zeolites) which don't contain vanadium. Set guidelines on proper disposal methods of engines, catalysts and filters, (i.e., melting, recycling, scrapping rather sending to a landfill)

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
(continued) Cleaner In-Use Off-Road Equipment:	Solid/Hazardous Waste: Catalyzed aftertreatment systems could be hazardous waste at the end of their useful life, depending on materials in catalytic coating. Solid/Hazardous Waste: Particulate filters could be hazardous waste due to ash containing metals, such as zinc. Also ash from periodic cleaning of filters could be considered hazardous for the same reasons. Water: Fluids (oils, etc) in engines that are replaced through repowering could leach into water.	Depending on materials used in aftertreatment systems, recycle precious metals (i.e., platinum) Reduce amount of ash produced such as by providing low-ash lubrication oil. Reclaim zinc. Ensure proper disposal and facility maintenance.
AGRICULTURAL EQUIPMENT		
Agricultural Equipment Fleet Modernization: Accelerate fleet modernization of agricultural equipment by replacing older, dirtier equipment with engines reflecting cleaner technologies.	Although there is no specific proposal at this time for agricultural equipment, if an emission reduction strategy similar to the Cleaner In-Use Off-Road Equipment is pursued, the potential adverse environmental impacts would be expected to be the same.	
EVAPORATIVE & EXHAUST STRATEGIES		
New Emission Standards for Recreational Boats: Adopt catalyst-based standards for new outboard engines and evaporative emission standards for all sources of recreational boat evaporative emissions.	None identified.	None required.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
Off-Road Recreational Vehicle Expanded Emission Standards: Adopt exhaust and evaporative emission standards to reduce the amount of ROG from off-highway motorcycles and all-terrain vehicles.	Air (exhaust): Potential for two-way catalysts to emit higher levels of NO2 affecting ozone, NO2, nitric acid, and secondary particulate. Noise: May increase if catalysts are used. Solid/Hazardous Waste (exhaust): Exhaust catalysts may contain hazardous materials including precious metals and benzene residue. Solid/Hazardous Waste (evaporative): Evaporative canisters may contain hazardous material including precious metals and benzene residue. Solid/Hazardous Waste (evaporative): Faulty control parts may be disposed of in landfills.	Use of three-way catalysts will reduce HC, CO, and NOx emissions. Encourage catalyst designs to include sound muffling Require proper disposal and/or recycling. Require proper disposal and/or recycling. Promote recycling.
Portable Outboard Marine Tank Evaporative Standards: Set evaporative emission standards to reduce emissions from tanks, hoses, primers bulbs and connecting devices.	None identified.	None required.
Refueling Gasoline Tank Evaporative Standards: Set standards for refueling gasoline tanks typically mounted on pickups and large recreational vehicles and used to refuel equipment and other smaller vehicles.	Solid/Hazardous Waste: Replacement control parts, such as carbon canisters and low permeating hoses, may be sent to landfills.	Promote recycling.
Gas Station Refueling Hose Evaporative Standards: Set evaporative emission standards to control permeation from gasoline dispenser hoses.	None identified.	None required.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
Enhanced Vapor Recovery for Above Ground Storage Tanks: Adopt enhanced vapor recovery performance standards and specifications to control standing loss and working loss emissions from above ground gasoline storage tanks.	None identified since replaced parts are usually reconditioned.	None required.
CONSUMER PRODUCTS		
Tighten standards or require product reformulation for consumer products categories.	Air: Potential small increase in greenhouse gases, depending on the alternative used. Air: Potential increase of TACs, depending on formulation. Hazards/Hazardous Materials: Reformulation for exempt VOC solvents may potentially increase flammability of solvent such as acetone and methyl acetate. Water: Any increase in PERC could negatively impact wastewater.	Ensure that HFC propellants are not the sole reformulation option. Prohibit use of TACs in categories where their use in formulation or reformulation is likely. Existing regulations require consumer products to meet criteria that ensures there are no significant safety concerns with transport and storage of products. None identified.

Potential Adverse Environmental Impacts of the Proposed 2007 State Strategies for the California SIP		
Strategy Description	**Potential Adverse Environmental Impacts**	**Potential Mitigation Measures**
PESTICIDES		
Restrict VOC emitted from field fumigation, and set a reactivity standard or requirement for registration of some liquid pesticides.	Agriculture: Acreage no longer fumigated to achieve VOC reductions could be converted to non-agricultural uses. Air: Methyl bromide and methyl isothiocyanate, which are ozone-depleting substances, may increase slightly in Ventura County. Solid/Hazardous Waste: Solid waste disposal may increase due to use of plastic tarpaulins under the proposed regulation. Water: Post-fumigation water treatments may require greater quantities of water use.	Emission limits can be met in all areas primarily by changing application methods. The allowable volume increase only in Ventura County is expected to be negligible. Most fumigations currently use tarpaulins as a feasible mitigation measure. Any increase over current disposal of tarpaulins is expected to be negligible. Drip chemigation uses irrigation systems rather than tractor application. This method offsets the use of diesel fuel and other undesirable effects associated with tractor use. The relative increase in water use over current use is expected to be minimal.

ECONOMIC IMPACT ANALYSIS

Introduction

ARB staff has estimated the costs and economic impacts that could result in 2014 from the proposed State Strategy to reduce emissions of oxides of nitrogen (NOx), reactive organic gases (ROG), fine particulate matter (PM2.5) and oxides of sulfur (SOx) in the South Coast and San Joaquin Valley State Implementation Plans (SIP). The emission reductions are needed to meet the attainment deadlines for the federal 8-hour ozone and PM2.5 standards. This analysis includes the costs and economic impacts of all proposed control measures under State jurisdiction, including passenger vehicles and trucks, goods movement, construction and mining equipment, engine exhaust and evaporation, and consumer products. It is important to note that the costs reflected in this section represent costs incurred in 2014 only although some measures will begin to be implemented prior to 2014 and continue after 2014.

The proposed State Strategy measures, when adopted as rules or regulations, are likely to cause technological changes that could increase the production costs for regulated industries. Increased costs could have an initial contractionary effect on those industries, which in turn could affect other related industries either negatively or positively. For example, industries that provide supplies and services to affected industries could experience a reduction in demand for their products and services while suppliers of environmental products and services could experience an increase in their sales. The net effect on the California economy of these activities hinges on the extent to which products and services are obtained locally. Using an updated version of Environmental-Dynamic Random Analysis model (E-DRAM)[1], staff estimated the net effects in 2014 of these activities on the affected industries and the overall economy. The California industries affected most are those engaged in the production, distribution, sales, and use of cars and trucks, goods movement, off-road equipment and engines, and consumer products.

The proposed State Strategy would bring about significant societal benefits, including less illness and medical expenses and fewer lost work and school days, to Californians. In its report to Congress in 1999, U.S. EPA found that the monetized benefits of the Clean Air Act exceed its compliance costs by a ratio of four to one.[2] Using the findings in this report and considering that ARB regulations are usually more stringent and thus more costly, ARB staff estimates

[1] For a complete description of E-DRAM, see Peter Berck, "The Economy-wide Effects of Air-Quality Regulations," prepared for California Air Resources Board, June 2005. Industrial sectors in the E-DRAM were further refined by David Roland-Holst and Ryan Kellogg, "Documentation of the 120 Sector SAM for California, 2003," July 2006.

[2] U.S. EPA Report to Congress, "The Benefits and Costs of the Clean Air Act 1990 to 2010," November 1999.

that each dollar spent on clean air in California generates, on average, three dollars in societal benefits.

Annual direct costs of all proposed State Strategy measures are estimated to be $4.6 billion in 2014. Increased costs that would result from the proposed State Strategy would reduce California's economic output in 2014 from $2.948 trillion to $2.938 trillion (roughly $10 billion or 0.30 percent), personal income by $5 billion (0.30 percent), and California employment by approximately 37,000 jobs (0.20 percent). These changes reflect a slight slow-down in the growth of the California economy from what it would be otherwise. From 2007 through 2014, California output is expected to grow by $74 billion, personal income by $45 billion, and employment by 198,900 per year. The impact of the proposed State Strategy would be a slight reduction in the annual growth rate of: economic output (from 2.85 percent to 2.80 percent); personal income (from 2.90 percent to 2.88 percent); and employment (from 1.20 percent to 1.17 percent).

Cost of Control Measures

Most control measures identified in the proposed State Strategy rely on the application of current technologies to achieve additional emission reductions. Some control measures, however, rely on the development of new technologies. The implementation of these control measures may fundamentally change the ways many products are manufactured, distributed, and used. Whether these changes require the reformulation of a consumer product or gasoline, retrofit of diesel trucks and buses, more stringent standards on in-board and outboard marine engines or modernization of port trucks, we assumed that they impose costs on businesses. This analysis provides estimates of those direct costs.

ARB staff estimated the cost of each control measure using the most reliable information available. For some control measures, staff developed control costs directly based on the application of current technologies. For most control measures, however, staff estimated control costs indirectly by multiplying either the cost-effectiveness estimate by the emission reduction associated with the proposed State Strategy measure, or an estimate of the unit cost increase by the number of products that are projected to be used.

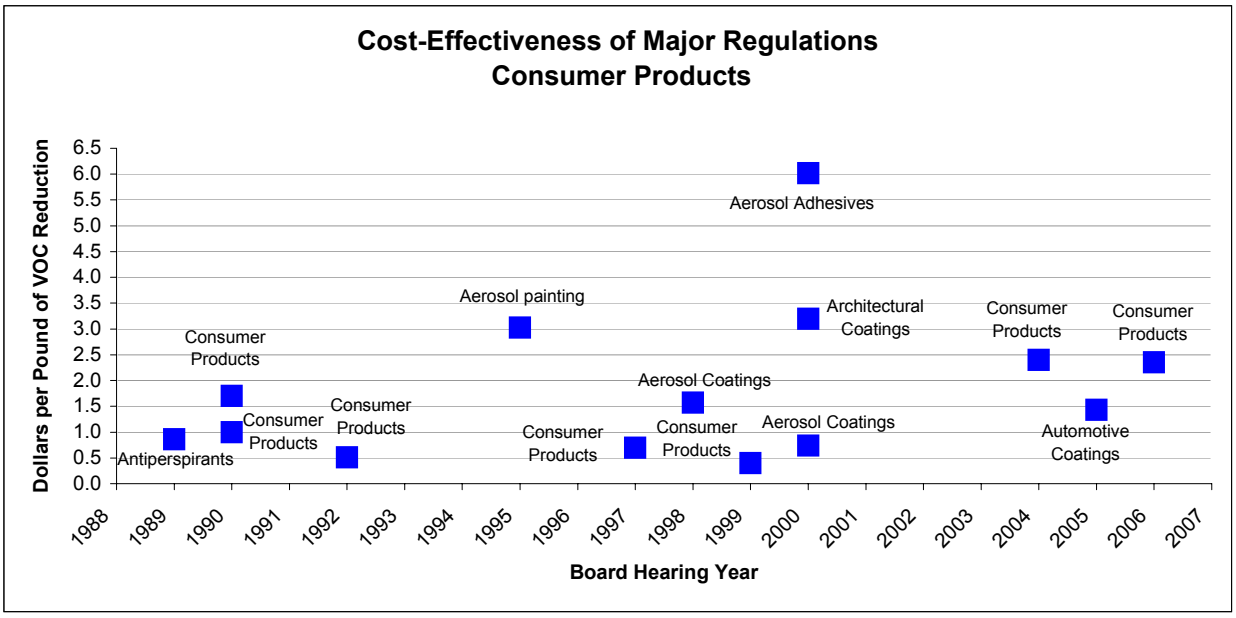
The control costs in this report represent very rough estimates of the costs of the proposed State Strategy and may change when more specific regulatory language is developed. There is an extensive public process as part of the development of each proposed State Strategy measure into a regulation or program. ARB staff gathers detailed industry-specific information and assesses the potential costs to businesses, government, and consumers. The measures will be discussed at public workshops, and proposed regulations will go through the public hearing process as required by law. When specific regulatory language is developed, it will be possible to analyze potential costs and

economic impacts in more detail. This information will be presented with each regulatory proposal for Board consideration.

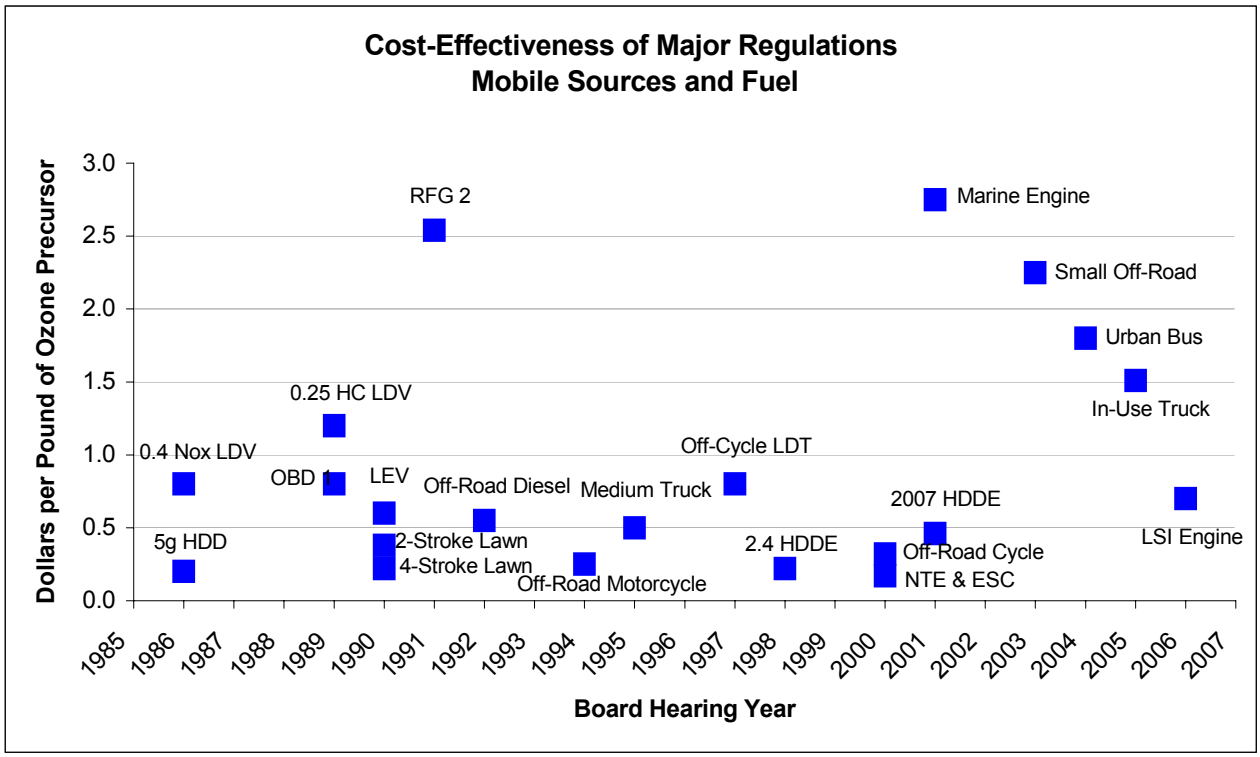
Cost-effectiveness Estimates

Cost-effectiveness is an estimate of the unit cost of reducing a pollutant which varies by pollutant and control strategy. The ARB cost-effectiveness estimation of its past control measures for ROG reductions from consumer products range from under $0.50 per pound ($1,000 per ton) to about $6 per pound ($12,000 per ton). For NOx+ROG reductions from mobile sources, the range varies from less than $0.50 per pound ($1,000 per ton) to about $3 per pound ($6,000 per ton). The figures below show cost-effectiveness estimates for California consumer products and mobile source control and fuel measures approved by the ARB in the late 1980s, 1990s, and early 2000s.

Cost-Effectiveness Values for Various Consumer Products Regulations



Cost-Effectiveness Values for Various Mobile-Source and Fuel Regulations



In the early 2000s, ARB adopted a number of PM control measures. The cost-effectiveness estimates for those measures ranged from $7 per pound ($14,000 per ton) to $28 per pound ($56,000 per ton).

For the purpose of this analysis, ARB staff made a very conservative assumption that future emission reductions will be more expensive to obtain than the past reductions. This is because firms are required to meet more stringent air quality standards or to control emission sources previously unregulated because of the high cost of control. In the past, however, businesses have always found innovative ways to meet standards at costs much lower than estimated by staff. We have no reason to believe that this trend will not continue in the future. For example, in 1988 the South Coast Air District estimated the cost of NOx reduction from a natural gas-fired power plant to be about $25,000 per ton compared to the industry estimate of $45,000 per ton. By 1995, when the rule requirements became effective, the actual cost of NOx control from power plants was about $12,000 per ton. Similarly, ARB staff estimated the cost to control evaporative emissions from vehicles to be about $170 per vehicle in 1990 while

the industry estimate was about $783 per vehicle. When the regulation was implemented, the actual cost of the regulation was closer to the lower estimate.[3]

The cost-effectiveness estimates used for the proposed State Strategy ranged from a low of approximately $3,000 to a high of $32,000 per ton of ROG emissions reduced, from $3,000 to $43,000 per ton of NOx emissions reduced, and from $5,000 to $55,000 per ton of PM emissions reduced. The cost-effectiveness estimates for SOx range from $8,000 to $43,000 per ton and are based on the use of clean fuels in ships and cold ironing of ship engines. These two measures are expected to reduce SOx emissions by 75 tons. The tables below illustrate how the cost of reducing a ton of either ROG or NOx would rise as more emission reductions are required. All cost-effectiveness numbers are in constant 2006 dollars.

Cost-Effectiveness Ranking of the Statewide Control Measures for ROG Reduction

Statewide Measures	Average C/E (2006 $/ton)	Rank	Estimated Statewide ROG Red. (TPD)	Estimated Statewide Cumulative ROG Red. (TPD)
More Stringent Cutpoints (Smog Check)	$3,020	1	1.6	1.6
Recreational Boat New Standards	$4,754	2	14.3	15.9
Consumer Products	$4,852	3	30.6	46.5
Low Pressure Evaporative Test	$5,427	4	8.2	54.7
Cleaner Line-Haul Locomotives	$10,082	5	3.8	58.5
Old Vehicle Retirement	$11,426	6	5.9	64.4
Off-Road Recreational Evaporative	$13,385	7	20.1	84.5
Cleaner In-Use Off-Road Equipment	$13,600	8	7.1	91.6
Reformulated Gasoline Program	$14,253	9	16.0	107.6
High Mileage Vehicles (Smog Check)	$15,773	10	1.0	108.6
Older Vehicle Inspection (Smog Check)	$21,303	11	6.3	114.9
Motorcycle Inspection (Smog Check)	$22,780	12	4.1	119.0
Cleaner In-Use Heavy-Duty Trucks	$31,789	13	22.3	141.3

[3] Lents, J.; Barnes, K.; Nikkila, N.; and Tatsutani, M.; The Regulation of Automobile Emissions: A Case Study. In Environmental Regulation and Technology Innovation: Controlling Mercury Emissions from Coal-fired Boilers. Northeast States for Coordinated Air Use Management, Boston, MA, September 2000.

Cost-Effectiveness Ranking of the Statewide Control Measures for NOx Reduction

Statewide Measures	Average C/E (2006 $/ton)	Rank	Estimated Statewide NOx Red. (TPD)	Estimated Statewide Cumulative NOx Red. (TPD)
More Stringent Cutpoints (Smog Check)	$3,020	1	4.1	4.1
Recreational Boat New Standards	$4,754	2	1.3	5.4
Clean Up Existing Harbor Craft	$4,964	3	16.3	21.7
Cleaner Ship Engines and Fuels	$8,092	4	94.4	116.1
Cleaner Line-Haul Locomotives	$10,082	5	40.5	156.6
Old Vehicle Retirement	$11,426	6	4.8	161.4
Cleaner In-Use Off-Road Equipment	$13,600	7	27.8	189.2
High Mileage Vehicles (Smog Check)	$15,280	8	3.3	192.5
Light/Med. Duty Diesels (Smog Check)	$18,600	9	1.1	193.6
Old Vehicle Inspection (Smog Check)	$21,303	10	14.5	208.1
Motorcycle Inspection (Smog Check)	$22,780	11	1.1	209.2
Cleaner In-Use Heavy-Duty Trucks	$31,789	12	193.8	403.0
Port Truck Modernization	$32,536	13	2.0	405.0
Auxiliary Ship Engine Cold Ironing	$42,866	14	26.0	431

Cost-Effectiveness Ranking of the Statewide Control Measures for PM2.5 Reduction

Statewide Measures	Average C/E (2006 $/ton)	Rank	Estimated Statewide ROG Red.(TPD)	Estimated Statewide Cumulative ROG Red. (TPD)
Clean Up Existing Harbor Craft	$4,964	1	0.8	0.8
Cleaner Ship Engines and Fuels	$7,553	2	11.7	12.5
Cleaner Line-Haul Locomotives	$10,082	3	1.3	13.8
Old Vehicle Retirement	$11,426	4	0.1	13.9
Lt./Med. Duty Diesels (Smoke Check)	$18,600	5	0.1	14.0
Cleaner In-Use Off-Road Equipment	$20,899	6	6.6	20.6
Cleaner In-Use Heavy-Duty Trucks	$31,789	7	12.7	33.3
Truck Fleet Modernization	$32,536	8	0.6	33.9
Auxiliary Ship Engine Cold Ironing	$42,866	9	0.4	34.3
Visible Smoke Test (Smoke Check)	$54,782	10	0.4	34.7

Annual Costs

Annual direct costs of all proposed State Strategy measures in 2014 are estimated to be approximately $4.6 billion. This represents about 0.2 percent of the California Gross State Product (GSP) in 2014. GSP measures the value of all goods and services produced in California in a given year.

The table below provides estimates of total annual costs of the proposed State Strategy by source categories for the year 2014. Measures to reduce emissions from heavy-duty trucks alone account for 57 percent of annual State Strategy costs. Measures to reduce emissions from passenger cars and heavy-duty trucks combined account for 66 percent of the costs.

Measures to reduce emissions from goods movement at California ports account for 26 percent of annual proposed State Strategy costs, of which about 81 percent stems from the use of cleaner engines and fuel for ships and the application of cold ironing to auxiliary ship engines. The remaining annual State Strategy cost is associated with measures that intend to reduce emissions from construction equipment (4 percent),

off-road engine exhaust and evaporation (3 percent), and consumer products (1 percent). All costs are in constant 2006 dollars.

Estimates of Total Annual Costs of the Proposed State Strategy for 2014
(Millions of 2006 Dollars)

	Statewide Cost	% of Total
Passenger Vehicles:	**396.6**	**8.6**
Smog Check:		
Low Pressure Evaporative Test	16.2	
More Stringent Cutpoints	6.3	
Annual Inspections for Older Vehicles	161.7	
Annual Inspections for High Annual Mileage Vehicles	24.8	
Add Visible Smoke Test	8.0	
Inspection of Light-Duty Diesels	8.2	
Inspection of Motorcycles	43.2	
Other:		
Old Vehicle Retirement	45.0	
Modifications to Reformulated Gasoline Program	83.2	
Trucks:	**2,654.8**	**57.4**
Cleaner In-Use Heavy-Duty Trucks	2,654.8	
Goods Movement:	**1,186.2**	**25.7**
Clean Up Existing Harbor Craft	31.0	
Auxiliary Ship Engine Cold Ironing & Other Clean Technology	422.4	
Cleaner Main Ship Engines and Fuels	534.0	
Accelerated Introduction of Cleaner Line-Haul Locomotives	167.9	
Port Truck Modernization	30.9	
Construction Equipment:	**206.0**	**4.4**
Cleaner In-Use Off-Road Equipment	206.0	
Evaporative & Exhaust Standards:	**125.3**	**2.7**
New Emission Standards for Recreational Boats	27.1	
Off-Road Recreational Vehicle Expanded Emission Standards	98.2	
Consumer Products:	**54.2**	**1.2**
Tighten Standards	54.2	
Total	**4,623.1**	**100.0**

Annual costs of the proposed State Strategy can also be classified by the type of pollutants. The table below provides a list of affected pollutants and their associated costs. As shown in the following table, NOx control accounts for 75 percent of total annual costs, ROG control for 15 percent, SOx control for 5 percent and PM2.5 for 5 percent. Of $4.6 billion total annual statewide costs, the cost for South Coast businesses and consumers will be $1.3 billion or 29 percent of statewide costs, and for San Joaquin Valley businesses and consumers it will be $757 million or 16 percent of the statewide costs.

Estimated Annual Costs of the Proposed State Strategy by Pollutants
(Millions of 2006 Dollars)

Pollutant	Annual Costs			% of Total
	Statewide	South Coast	San Joaquin	
ROG	$ 699.9	$ 227.8	$113.9	15
NOx	$3,449.7	$ 976.5	$608.3	75
SOx	$ 230.0	$ 61.1	N/A	5
PM2.5	$ 243.5	$ 63.2	$ 35.1	5
Total	**$4,623.1**	**$1,328.6**	**$757.3**	**100.0**

In order to estimate the total impact of the proposed State Strategy on the California economy, we also classified these costs according to the latest E-DRAM industrial sector classifications. The new model has 108 industrial sectors, of which six industrial sectors and one household sector would be affected directly by the proposed State Strategy. The next table provides estimates of total annual costs by affected industries and government. About 1 percent of the total annual cost would be borne by government and about 83 percent by transportation industry. The balance will be borne by the vehicle service industry (6 percent), construction industry (4 percent), boat and shipping repair industry (3 percent), petroleum refinery industry (2 percent), and chemical and drug industry (1 percent).

Estimates of Total Annual Costs of Proposed State Strategy by Affected Industries for 2014
(Millions of 2006 Dollars)

Industry	Annual Costs	%Total
Boat and Ship Building Repair	$ 125.3	3
Chemical and Drugs Manufacturing	$ 54.2	1
Construction Industry	$ 206.0	4
Government Payments to Household	$ 45.0	1
Petroleum Refining	$ 83.2	2
Vehicle Services	$ 268.4	6
Transportation	$3,841.0	83
Total	**$4,623.1**	**100**

Economic Impacts

Control costs provide a means to estimate the direct expenditures that will be incurred by California businesses, governments, and individuals to meet the requirements of the proposed State Strategy. These costs would in turn bring about additional (indirect) changes in the California economy that may increase the overall costs. Increased control costs, for example, may result in higher product prices. California firms may respond by cutting back production and

decreasing employment. On the other hand, the planned control measures may also increase demand for environmental products and services, thus inducing firms supplying those products and services to expand their production and increase their hiring of workers.

This change in costs will in turn affect other industries both negatively and positively. The net effect on the California economy of these activities hinges on the extent to which products and services are obtained locally. Using a macroeconomic model, staff estimated the net effects of these activities on affected industries and the overall economy. The California industries affected most are those engaged in the production, distribution, sales, and use of passenger vehicles and trucks, goods movement, construction and agricultural equipment, engine exhaust and evaporation, and consumer products.

The economic model, however, does not account for the enormous benefits to California businesses and citizens that air quality regulations will bring. Improved air quality reduces illness and infant mortality and increases natural resources and work force productivity. Control programs also induce significant advancement of clean technologies. As stated earlier, ARB staff estimates that the benefits to California from currently adopted air pollution control measures exceed the costs by about three to one. That is, each dollar spent on clean air generates, on average, three dollars in societal benefits that improve the quality of life.

Environmental-Dynamic Revenue Analysis Model (E-DRAM)

The overall impact of all direct and indirect economic effects associated with the planned control measures are estimated using a computable general equilibrium (CGE) model of the California economy. A CGE model simulates various economic relationships in a market economy where prices and production adjust in response to changes in behavior resulting from regulatory changes. More specifically, it describes the relationships among producers, consumers, government, and the rest of the world. The CGE model used for this analysis is the latest updated version of the Environmental Dynamic Revenue Analysis Model (E-DRAM). E-DRAM was first developed as DRAM for the California Department of Finance [4]. The model can be used to measure the total impact of a change caused by a regulation in one industry on all other industries within California. The economic impact results are measured in terms of changes in the State output, personal income, and employment.

The new model is based on a revised database called a social accounting matrix (SAM). The revisions to SAM include a calibration of the base year in the model to calendar year 2003 from fiscal year 1998-1999, an updating of energy data, and a more detailed sectoring of the California economy. The new E-DRAM

[4] For a complete description of DRAM, see Berck, Peter, E. Golan and B. Smith, "Dynamic Revenue Analysis for California, California Department of Finance, Summer 1996.

divides the California economy into 174 distinct sectors, consisting of 108 industrial sectors, two factor sectors (labor and capital), eight household sectors (classified by income level), nine composite goods sectors, one investment sector, and 45 government sectors (seven federal, 27 State, and 11 local), and one sector that represents the rest of the world.

Data for the industrial sectors originated with the Bureau of Economic Analysis of the U.S. Department of Commerce, based on the Census of Business – a detailed survey of companies conducted in the U.S. every five years. The conversion of national data to updated California data is accomplished by Impact Analysis for Planning (IMPLAN), a program that primarily utilizes state-level employment data to scale national-level industrial data down to the size of a state.

In much the same way as firms, households are also aggregated. California households were divided into categories based upon their taxable income. There are seven such categories in the model, each one corresponding to a California personal income tax marginal tax rate (0, 1, 2, 4, 6, 8, and 9.3 percent). Thus, the income for the "one-percent" household is calculated by adding up the income from all households in the one-percent bracket.

Similarly, the expenditure of the one-percent household on agricultural goods is calculated by adding up all expenditure on agricultural goods for these households. The total expenditure on agricultural goods is found by adding the expenditure of all households together.

Overall Economic Impact

Increased costs of the proposed State Strategy will affect the California economy through many complex interactions. E-DRAM was developed to simulate many of these complex interactions. Using the model, ARB staff, in consultation with UC Berkeley researchers, conducted an assessment of the economic impacts of the proposed State Strategy on the California economy.

The results shown below are based on preliminary emission reduction estimates and may change slightly. ARB staff will perform a confirmatory analysis with E-DRAM prior to the hearing for Board approval.

The following table summarizes the impact of the proposed State Strategy on the California economy in the year 2014, based on the E-DRAM results. We project the costs of the proposed State Strategy will reduce California economic output by roughly $9 billion (0.3 percent) and California employment by approximately 37,000 jobs (0.2 percent) in 2014. Personal income would also decline by roughly $5 billion (0.3 percent) in 2014.

Impact on the California Economy of Proposed State Strategy in the Year 2014
(Billions of 2006 Dollars)

California Economy	Without State Strategy	With State Strategy	Difference (Impact)	% Total
Output	$2,948	$2,939	-$ 9	-0.3
Personal Income	$1,739	$1,734	-$ 5	-0.3
Employment (thousands)	17,782	17,745	- 37	-0.2

Conclusion

Total annual direct costs associated with the proposed State Strategy are estimated to be approximately $4.6 billion in 2014, 29 percent of which will be on South Coast residents and 16 percent on San Joaquin residents. Accounting for indirect costs, the proposed State Strategy is expected to reduce California economic output by about $9 billion, personal income by about $5 billion, and employment by about 37,000 in 2014. In the context of the State's economy, the economic impact of the proposed State Strategy is small and is not expected to impose a noticeable impact. It should be noted here that the proposed State Strategy would bring about significant societal benefits to Californians. These benefits, which are difficult to express solely in economic terms, are not quantified in this analysis. Prior analyses have estimated that the benefits of California's air quality regulations exceed the costs by a ratio of about three to one.

Appendix F

Emission Inventory Description

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TABLE OF CONTENTS

1. Introduction

Purpose

This **Emission Inventory Appendix** describes the emission inventory and the role it plays in the State Implementation Plan (SIP) development process. An emission inventory is an estimate of the amount and type of pollutants emitted into the atmosphere over a defined period of time. Emission inventories serve three principal roles in the development of the SIP:

- They provide the emissions data used for developing control strategies;
- They are a primary input to photochemical modeling used in attainment demonstrations; and
- They are used to track progress in meeting the emission reduction commitments.

This document will discuss the requirements for SIP development as it pertains to emission inventories, describe the elements (or sectors) that make up an emission inventory, provide an overview of the methodologies used to derive emission estimates, summarize the recent improvements to the emission inventory, and explain how the emission inventory is documented through Quality Assurance (QA) and Quality Control (QC).

Statutory Requirements

The federal Clean Air Act (CAA) contains the statutory requirements for attaining clean air (air quality standards). The U.S. Environmental Protection Agency (U.S. EPA) regulations list requirements pertaining to emissions information that must be included as part of the SIP submittal package. The regulations require that the SIP emission inventory contain the pollutants for which an area is nonattainment. For an 8-hour ozone SIP, the emission inventory must contain the two ozone precursors: oxides of nitrogen (NOx) and reactive organic gases (ROG). (The terms, ROG and VOC (volatile organic compounds), are used interchangeably in this document.) For the PM2.5 SIP, the emission inventory must contain directly emitted PM2.5 and PM precursors: NOx, ROG, sulfur oxides (SOx), and ammonia (NH3).

Emission Inventory Overview

Basic Elements of the Emission Inventory

An emission inventory is a critical tool in the evaluation of air pollution. Very simply, an emission inventory is a systematic listing of the sources of air pollution along with the amount of pollution emitted from each source or category over a given time period. Emission inventories are an estimate of the air pollution emissions that are actually released into the environment—they are not measurements of ambient concentrations. The following are examples of pollution sources by key sectors:

- Industrial sources—power plants and oil refineries;
- Area-wide sources—consumer products and residential fuel combustion for heating homes;
- On-road sources—passenger vehicles and heavy-duty trucks;
- Off-road mobile sources—aircraft, trains, ships, recreational boats, construction equipment and farm equipment; and
- Non-anthropogenic (natural) sources—biogenic (or vegetation), geogenic (petroleum seeps), and wildfires.

The first four sectors listed are examples of anthropogenic, or human caused, emission sources. California's statewide emission inventory includes over 17,000 individual facilities (or point sources) where business addresses are specifically identified. These facilities comprise approximately 14,000 process/industry types.

The emission inventory also includes approximately 450 area-wide source categories. The area-wide source categories include aggregated point sources, or facilities, that are not inventoried individually but are estimated as a group and reported as a single source category, for example, gas stations and dry cleaners. Area-wide sources typically are associated with human activity and take place over a wide geographic area. Consumer products and unpaved road dust are additional examples of area-wide sources. The complete methodologies for these and all area-wide source categories can be found at: http://www.arb.ca.gov/ei/areasrc/areameth.htm.

The mobile source emission inventory is developed by ARB's emission factor models - EMFAC and OFFROAD. EMFAC estimates on-road emissions from all on-road motor vehicles, from passenger cars through heavy duty diesel trucks, and groups them in 250 categories (or technology groups). Off-road categories include emissions from all vehicles and equipment that operate off-road which includes aircraft, locomotives, lawn and garden, cargo handling, construction, and ships and harbor-craft. OFFROAD groups these equipment into 1300 categories. For each category in EMFAC and OFFROAD, emissions are given by emission mode (e.g. running exhaust, starts, evaporative losses, and tire and brake wear).

Non-anthropogenic sources generally include source categories with naturally occurring emissions such as wildfires and geogenic sources (e.g., petroleum seeps).

Agency Responsibilities

ARB works jointly with the thirty-five local air pollution control and air quality management districts (districts) to develop a comprehensive statewide emission inventory. Districts are responsible for developing emission estimates for major facilities (point sources) in their jurisdictions by working closely with facility owners. Districts are also responsible for developing emission estimates for approximately one-third of the non-point (or area-wide) sources.

ARB is responsible for developing the mobile source inventory (both on-road and off-road sources) and the remaining two-thirds of the area-wide sources. ARB works with other state agencies including the California Department of Transportation (CalTRANS), the Department of Motor Vehicles (DMV), and local councils of government (COGs) to assemble motor vehicle activity information necessary for the mobile source emission estimation models. To estimate emissions for the remaining two-thirds of the area-wide sources, ARB works jointly with State agencies, such as the Department of Pesticide Regulation (DPR) which develops the emission estimates for pesticides and the California Energy Commission which maintains power production and energy demand data that are critical for estimating future emissions growth from power plants.

Pollutants and Precursors

California's ozone attainment strategy is to reduce emissions of ozone precursors – NOx and VOC. The strategy for reducing PM2.5 focuses on reducing NOx.

Oxides of Nitrogen (NOx)

NO_x from anthropogenic sources occurs primarily when fossil fuels are combusted at high temperatures. The table below shows that in 2006, 85 percent of NO_x emissions in California are generated from mobile sources such as cars, trucks, buses, aircraft, and trains, while area-wide and stationary sources contribute the remaining 15 percent.

2006 Statewide Emission Inventory – Nitrogen Oxides

NOx Emissions (Annual Average)		
Source	**Tons/day**	**Percent**
Stationary	**419**	**12 percent**
Area-wide	**96**	**3 percent**
On-road Mobile	**1848**	**51 percent**
Gasoline vehicles	679	19 percent
Diesel vehicles	1169	32 percent
Other Mobile	**1235**	**34 percent**
Gasoline vehicles	76	2 percent
Diesel vehicles	825	23 percent
Other	333	9 percent
Total Statewide	**3598**	**100 percent**

Reactive Organic Gases (ROG)

Reactive Organic Gases[1] are any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in atmospheric photochemical reactions to form ozone and particulate matter (PM10 and PM2.5) in the atmosphere. References ii and iii provide information on the differences between ROG and VOCs.

The primary anthropogenic sources of ROG in California, as shown in the table below, are on-road mobile which includes exhaust, fuel evaporation, and incomplete fuel combustion, and area-wide sources which includes solvents from dry-cleaning, degreasing, and coating operations.

2006 Statewide Emission Inventory – Reactive Organic Gases

ROG Emissions (Annual Average)		
Source	**Tons/day**	**Percent**
Stationary	**389**	**17 percent**
Area-wide	**654**	**28 percent**
On-road Mobile	**743**	**32 percent**
Gasoline vehicles	670	29 percent
Diesel vehicles	73	3 percent
Other Mobile	**541**	**23 percent**
Gasoline vehicles	389	17 percent
Diesel vehicles	111	5 percent
Other	41	2 percent
Total Statewide	**2327**	**100 percent**

Particulate Matter (PM2.5)

Particulate matter (PM) is a complex mixture of varying sized particles and liquid droplets including components such as acids, organic chemicals, metal, and soil or dust. There are two types of PM: primary and secondary. Primary PM is emitted directly from a source, such as unpaved roads, fires, and demolition or construction sites. Secondary PM is formed by complex reactions in the atmosphere with chemicals such as sulfur and nitrogen dioxides. The majority of “fine particles” (PM2.5) is formed by these complex reactions. A subset of PM2.5 of particular concern are those that are emitted by diesel engines.

2006 Statewide Emission Inventory – PM2.5

PM Emissions (Annual Average)		
Source	**tons/day**	**Percent**
Stationary	**103**	**13 percent**
Area-wide	**568**	**70 percent**
On-road Mobile	**66**	**8 percent**
Gasoline vehicles	15	2 percent
Diesel vehicles	43	5 percent
Break & Tire wear	8	1 percent
Other Mobile	**81**	**10 percent**
Gasoline vehicles	10	1 percent
Diesel vehicles	41	5 percent
Other	29	4 percent
Total Statewide	**817**	**100 percent**

Geographic Considerations

In California, the emission inventory is constructed at the district, air basin, and county levels. This provides the flexibility needed to meet the jurisdictional requirements of local and State governments while addressing the spatial aspects of air quality issues. In cases where nonattainment areas do not line up with these geographic boundaries, ARB further resolves the inventory to estimate the portion of emissions that occur within nonattainment area boundary lines. This is done by selecting only the point sources that fall within the nonattainment area boundaries, and estimating the emissions contribution of each area-wide and mobile source category to the nonattainment area.

California recently approved the statewide Emission Reduction Plan for Ports and Goods Movement that extends the off-shore boundaries for estimating the emission impact from shipping activities, thus leading to a modification in the geographic accounting of the off-shore emissions in the inventory. Formerly, only marine emissions occurring within a 3-mile range were included as part of California's emission inventory. The SIP emission inventory now includes emissions from shipping activities out to 100 miles. In the new definition, emissions occurring within three miles of the shore line are assigned to the nearest air basin (e.g., emissions occurring within three miles of the Los Angeles County shore line are assigned to Los Angeles County in the South Coast Air Basin). Emissions occurring outside the 3-mile boundary are assigned to the Outer Continental Shelf Air Basin, but are still associated with the responsible county and district (e.g. the emissions occurring outside of the 3-mile boundary of Los Angeles County would be assigned to the Outer Continental Shelf Air Basin and would be the responsibility of the South Coast Air District).

Base Year Inventory Selection for the SIP

The SIP is based on emission projections that are linked to a base year inventory. U.S. EPA identified 2002 as the emission inventory base year for the 8-hour ozone and PM2.5 SIPs. This selection was announced by memoranda to the States in November 18, 2002[2].

Emission Estimation Concepts

The key to the emission inventory is found in what is termed the "emission process". The emission process defines the fundamental level at which emissions are calculated, stored, and maintained in the inventory. The total emissions for each emission process are calculated by applying a process rate (i.e., the number of emission activity units) to the emission factor (i.e., the amount of emissions per activity unit).

In principle, this simple concept holds for all emission sectors (i.e., point, area-wide, on-road mobile, and off-road mobile). Differences lie in the method or approach used to derive the process rate and emission factors. For example, the emissions from a power plant could be calculated by applying an emission factor (pounds of emissions per megawatt-hour) times the number of megawatt-hours of electrical energy generated. The emissions from the light-duty passenger car fleet could be calculated by applying an emission factor (grams of emissions per mile traveled) times the total vehicle miles traveled (VMT) for that mobile category. It should be noted that the examples above are simplified—particularly for on-road and off-road emissions. These emission factors are specific to model year, technology and fuel type, and are adjusted for temperature, humidity, and operating speed.

Emission Forecasting Overview

Emissions forecasting depends on two independent variables: growth and control. For stationary sources, socioeconomic growth profiles are developed and linked to the inventory via the inventory process and/or industry types. For example, power plant growth is estimated based on the combined effects of economic growth in the sector along with the projected energy utilization by the California Energy Commission (CEC). Growth for consumer products is estimated by population growth at the county level. These growth profiles are constructed for the entire timeframe addressed in the SIP.

The California Emission Forecasting System (CEFS) includes growth data for the period 1990–2030 for SIP forecasting exercises. Similarly, control profiles are constructed to reflect adopted emission control measures. A control profile is developed that describes the implementation of the rule and the profile is included as part of the baseline CEFS forecasts. CEFS projections are run for the entire State by applying the growth and control profiles to the 2002 base year inventory to obtain the projections needed for SIP analysis.

EMFAC and OFFROAD do not use a base year projection approach. Rather, the emission models employ sophisticated routines that predict vehicle fleet turnover by vehicle model year. As with stationary sources, EMFAC and OFFROAD include control

algorithms that account for all adopted regulatory actions (e.g., an amended emission standard to be implemented by a certain year, or increased stringency on a roadside inspection program to be implemented in a future year) which, when combined with the fleet turnover algorithms, provide baseline projections.

CEFS integrates the projected inventories for stationary and mobile sources into a single database to provide a comprehensive statewide forecast inventory. Nonattainment area inventories are extracted from this comprehensive inventory. This establishes the baseline projections from which the SIP inventory is constructed. The data are accessible to ARB and district planners via user-friendly web reporting tools.

Types of Inventories (Annual Average, Seasonal, Modeling)

Annual Average

Annual average emissions data by major source category in tons per day are derived from a simple average by taking the annual emissions reported (or estimated) in tons per year and dividing the emissions by 365 days.

Seasonal Inventories

Summer and winter planning emissions take into account the temporal variation (e.g. activity variation) of emissions at a facility or a source category throughout the year. This is accomplished by collecting throughput or activity data from point source facilities where available, and developing temporal profiles for area sources to estimate monthly variation of the emissions. CEFS calculates summer and winter planning emissions based on these temporal data. The summer planning season for California is May-October, and the winter planning season is November-April. (Note: U.S. EPA assumes a shorter summer planning period (June-August) in its temporal data collection schema.) California requires planning evaluations to be based on a longer summer because it experiences longer periods in which temperatures are warm enough to contribute to ozone formation than most other states). The summer season planning emission inventory is used in ozone SIP planning.

Modeling Inventories

CEFS also generates emission inputs for photochemical modeling exercises. The categories handled by CEFS are stationary, area-wide and off-road mobile sources. (Note: Modeling emissions for the on-road sector are generated with EMFAC/DTIM, and these modeling inputs are handled outside of CEFS.) Modeling inventories are month/day-specific estimates that are temporally and spatially resolved at a finer level than planning inventories—CEFS calculates emissions for a typical weekday or a typical weekend day based on weekly operation profiles identified for the emissions processes. Point source locations are identified in CEFS by the Universal Transverse Mercator (UTM--North American Datum (NAD83) version) geographic coordinate system. Modeling inventory projections include facility level emissions at the facility, device, and process level with stack locations and associated flow characteristic as applicable. Area source emissions are maintained at the county level and are further resolved

based on spatial surrogates as a post-processing step prior to modeling. The day specific emissions are generated for typical weekday and weekend periods.

Planning and Modeling Inventory Differences

The temporal information used to determine seasonal planning inventories is also used to develop month/day-specific modeling inventories—the data are just further resolved for modeling inventories. It should be noted that modeling inventories generated by CEFS are not actual day specific emissions based on field studies—they are estimates of emissions for "typical" operating conditions. In some cases, "actual" day-specific information is available and this can be used to overwrite the results of the CEFS emission modeling inventory outputs. It is important to note that because modeling inventories are month/day-specific, the emission numbers will not match the planning inventory emissions.

2. Emission Inventory Improvements

Overview

ARB devotes substantial effort to continually improve the emission inventory. Updates to the inventory occur through three processes: planning and development, regulatory support, and special studies. The new information acquired and methodologies developed are folded back into the models as well as the methodologies for sources not previously included. This is a dynamic process and ARB will continually work to improve its methodologies through research and stakeholder feedback.

Improvement Process

Planning and Development - SIP

The planning process is undertaken to develop strategies for meeting air quality goals. The SIP inventory is the centerpiece data element for determining future attainment in photochemical modeling exercises, and the basis for defining control strategies.

Regulatory Support

The regulatory process identifies potential emission reductions. This typically involves new surveys to gather the most up-to-date data (e.g. equipment activity and populations). These improved data allow for more accurate emission estimates and identify key areas where reductions can be achieved. The planning and regulatory processes are also used to solicit peer review and stakeholder input.

Special Studies / Research

Another mechanism through which improvements are made is special studies. These studies may or may not be associated with the SIP or regulatory support processes but are used to further the understanding of emission modeling and verification. Special studies include funding or participating in cutting edge research projects, developing

innovative emission inventory methodologies, and collaborating with industry, academia and the public to better understand emissions processes. Examples of special studies include, but are not limited to, Southern California Ozone Study and Central California Ozone Study related research. The results from these projects have provided data that allow validation checks between observed air quality and emission trends[3], and emissions associated with air quality exceedances[4].

Stakeholder Outreach

ARB works jointly with other State agencies, districts, and stakeholders to develop a comprehensive emission inventory on an annual basis. Comprehensive inventories are submitted triennially and partial inventories are submitted annually to U.S. EPA for the National Emission Inventory[5] (NEI). ARB also publishes the most current emission inventory in the annual Almanac of Emissions and Air Quality[6].

Quality Assurance/Quality Control (QA/QC)

QA/QC is a formal process focused specifically on ensuring the integrity and accuracy of the inventories for the California 2007 8-hour ozone SIP and PM2.5 SIP in California. ARB formally initiated this comprehensive effort in September 2004 through its Emission Inventory Technical Advisory Committee (EITAC). This started an iterative process of continual updates to the 2002 base year emission inventory for stationary point and area-wide sources (including growth and control data), leading up to the finalization of the SIP inventory. In addition, ARB emission inventory staff worked jointly with the ARB's modeling staff through the Gridded Emission Coordination Group that includes district modeling staff and industry representatives. A principle aim of this group is to provide a critical feedback loop to emission inventory staff to ensure that inventory inputs have been reliably prepared for use in photochemical modeling.

The statewide emissions inventories are assembled and maintained by ARB in the California Emission Inventory Development and Reporting System (CEIDARS) and California Emission Forecasting and Planning Inventory System (CEFS) databases. Before an emission inventory is approved, a series of checks are performed to assure that the correct statewide emissions estimates are reported. Upon completion of the models, various scenarios are run to provide emissions by county, air basin, district, EIC code, pollutant, calendar year, and season. Queries are then run on these scenarios to provide the statewide emission totals by pollutant and year. Finally, as a check to ensure that what CEFS estimates as state totals match what EMFAC/OFFROAD estimates, the CEFS queries are matched against EMFAC/OFFROAD model output.

Inventory verification[7] is another important step to ensure the accuracy of the emission inventory. Since 1987 there have been a number of studies that have contributed to model development. In these tests, emissions from vehicle fleets are compared to output for similar fleets calculated from the EMFAC model. Comparisons have been made between EMFAC fuel consumption estimates and actual fuel sales for that fleet reported by the State Board of Equalization, and emissions derived from fuel sales and remote sensing data.

Specific Category Improvements

Stationary

Methods for estimating emissions from industrial point sources have continually improved as district staff work with facility owners to ensure that reported emissions are real as opposed to permitted (or potential) values. The California Clean Air Act Fee Regulation imposes fees on large permitted point sources thus encouraging facility owners to report the most accurate emissions possible. ARB audits the district emission inventory programs on a planned cycle to further ensure that emission inventory program requirements are met.

Area-wide

New survey data for consumer products and architectural coatings improve the aggregated inventory estimates as well as a better characterization of emissions at the product type. Currently there are 152 consumer product categories and 56 architectural coatings categories - the 1994 SIP inventory only had three categories each. The same is true for degreasing categories - the 1994 SIP had only five categories and the current inventory now has 32 categories. Improvements have also been made to the agricultural industry categories as a result of a partnership between ARB and the agricultural community. ARB participates in an ad-hoc agricultural advisory committee to approve methods used for estimating base year emissions and future year growth and control assumptions for forecasting. The methodologies for the following categories have also been updated: auto refinishing, industrial coatings and solvents, livestock husbandry, pesticides, waste burning, wildland fire use, ammonia, and wineries. The most recent improvements to the area-wide emission inventory sectors are described below:

- *Ammonia*

A comprehensive 2002 ammonia inventory was developed for all area-wide sources (in addition to on-road, off-road, and natural sources). The emissions were calculated using data provided in reports by ENVIRON and the NASA Ames Research Center.

- *Architectural Coatings*

In response to the California Clean Air Act Fee Regulation, several architectural coating manufacturers submitted revisions to their 2001 survey data (calendar year 2000 sales). The changes in sales volume and emissions were applied uniformly across all categories.

- *Auto Refinishing*

This category was updated using data from a 2001 ARB survey and the emissions were grown to 2002.

- *Consumer Products*

Two sets of changes have been incorporated into the consumer products inventory. First, manufacturers submitted revisions to their 1997 survey data in response to the California Clean Air Act Fee Regulation and resulted in updates for 13 categories. Next,

results of the 2001 Consumer Products Survey have been incorporated. Some categories have been expanded and several new categories have been added.

- *Industrial Coatings and Solvents*

The emissions for several of these categories have been updated using the U.S. Census Bureau's 2002 Industrial Report for Paint and Allied Products. The nationwide consumption data were apportioned to California using manufacturing employment data for the industry sectors likely to use the specific types of industrial coatings.

- *Livestock Husbandry*

ARB published a new methodology in 2004 for estimating ROG emissions from livestock facilities including dairies, feedlots, poultry operations, and other confined animal facilities. The methodology also includes PM estimates for dairies and feedlots. The emission estimates are based on animal population data from the year 2000. ARB uses district-specific data where available and employs a generalized methodology where data are lacking. For permitting purposes and to more fully reflect the process-specific livestock emissions, the San Joaquin Valley Air District has adopted livestock emission factors that differ from the ARB default values.

- *Pesticides*

The pesticide inventory includes the emissions from agricultural and structural applications. Updated emissions for 2003 are calculated using information from the annual Pesticide Use Report (PUR) database and pesticide product emission potential (EP) data maintained by the California Department of Pesticide Regulation (DPR). The EPs that are assigned to the products are either measured by thermogravimetric analysis (TGA), calculated by DPR chemists, or assigned a default value equal to the median TGA-based EP in each formulation category. Prior to 2002, DPR assigned EP values to products with no measured values as the maximum TGA in that category. The use of median rather than maximum TGA values has resulted in a significant lowering of ROG emissions for pesticides with default emission values. The average 2003 TOG and ROG emissions from all agricultural and structural pesticides were 55 percent lower in 2003 than in 1995. The most significant reduction was in the structural methyl bromide category, likely due the Montreal Protocol, which mandates the phase-out of methyl bromide.

- *Waste Burning*

Emissions result from the waste burning of agricultural residues, weed abatement, range improvement, and other materials. Although this is a district-reported category, ARB has developed default 2002 emission estimates for several districts that have not provided updates in recent years. Updated emissions data have been developed for the following areas: South Coast Air Basin, Mojave Desert Air Basin, San Diego Air Basin, Salton Sea Air Basin, Amador County, and Western Nevada County. There have been no changes to the underlying methodology for calculating emissions. The emissions are based on district-reported burning activity. Emission factors and fuel loading values have been expanded to include more specific crop types.

- *Wildland Fire Use (WFU)*

A WFU is a naturally ignited lightning fire that is managed for resources benefit. The WFU emission inventory category was created in 2004, and inventory back-populated to 1994 where data were available. WFU emissions are calculated using the Geographic Information System (GIS) based Emission Estimating System model developed for ARB by UC Berkeley's Center for the Assessment and Monitoring of Forest and Environmental Resources laboratory.

- *Wineries*

This is a newly updated methodology for wine fermentation emissions. The emission factors for wine fermentation have not been updated from the older methodology, but the source of wine fermentation activity has been updated. The Tax and Trade Bureau (TTB) is now the source of estimates for amounts of wine fermented in the state. Temporal data gained from the TTB records allow us to give detailed monthly breakouts of wine fermentation in the state.

Mobile

ARB is continually improving EMFAC and OFFROAD, and emission inventory elements as represented in each model. The following discussion includes evolution of EMFAC and OFFROAD, inventory verification, and improvements made for EMFAC2007 and the SIP.

On-road

The following are modifications to the model and the inventory since the last SP. For a more thorough technical explanation please refer to the tech memos at http://www.arb.ca.gov/msei/msei.htm, and http://www.arb.ca.gov/msei/onroad/previous_version.htm. The changes below are those changes reflected in EMFAC2007 that have occurred since EMFAC2002.

- *Revisions to the Methodology used to Characterize the On-road Vehicle Fleet*

Vehicle population data by class, age and geographic area used in EMFAC are based on the Vehicle Registration Database maintained by the California Department of Motor Vehicles (DMV). EMFAC back-casts historic changes in vehicle population using the oldest DMV data available, and forecasts from the most recent. As new data are received, projections are replaced with actual data. EMFAC2007 population estimates were updated based on 2000-2005 data.

- *Modification of Mileage Accrual Rates*

Previous mileage accrual rates were based on Smog Check data acquired from 1991-1995. To more accurately model vehicle miles traveled, the new model incorporates data from Bureau of Automotive Repair (BAR) 2001-2003 for the following gasoline powered vehicle classes: passenger cars, light-duty trucks (Tiers 1 and 2), medium-duty trucks, light heavy-duty trucks (Tier 4 and 5), and motor homes.

- *Updating Vehicle Miles Traveled and Speed Distributions*

Vehicle miles traveled and speed distributions were submitted by transportation planning agencies for the South Coast, the San Francisco Bay Area, and San Diego and Santa Barbara Counties and used to update EMFAC.

- *Modifications to the Inspection Maintenance Programs*

Modifications were made to reflect the changes in inspection and maintenance (I&M) programs for areas that upgraded to the enhanced Accelerated Simulation Mode program and change-of-ownership exemptions.

- *Ethanol Permeation*

In the prior EMFAC, evaporative emissions were correlated to oxygen content. Evaporative emissions from methyl-tert-butyl ether (MTBE) and ethanol (EtOH) were assumed to be similar since both contained two percent oxygen. Because recently completed studies indicate that EtOH has much higher permeation rates through fuel tank walls, hoses and fittings, EMFAC was modified to reflect these findings.

- *Revision of Heavy Heavy-Duty Diesel Truck Emission Factors and Speed Correction Factors*

New chassis dynamometer testing data developed through the CRC E55-59 program were analyzed and integrated into EMFAC. Emission factors for this category reflect all available data from CRC as well as other data sets. These data were used to develop new emission factors and speed correction factors. New tampering, mal-maintenance and malfunction survey data were used to update deterioration rates, demonstrating that heavy heavy-duty diesel truck emissions are greater than previously estimated. Trucks were for the first time tested over an ARB-developed heavy-heavy-duty test cycle, generating idle emissions data covering a wide span of model years as well as emission data at several different speeds and idle. These new data have been adopted by ARB and used to generate new emission factors and new speed correction factors.

- *Redistribution of Heavy Heavy-Duty Diesel Truck Vehicle Miles Traveled in California*

Vehicle miles traveled estimates are provided by the transportation planning agencies, but ARB is responsible for the distribution of that VMT by vehicle class and region. Heavy duty diesel truck VMT in EMFAC2002 was allocated based on truck registration. This method is appropriate for light duty vehicles and heavy duty gasoline trucks, but heavy heavy-duty diesel trucks travel extensively outside their registration counties. VMT was redistributed in EMFAC2007 using survey information from the California Department of Transportation (CalTrans) and modeled from MVSTAFF, an annual report by CalTrans. The new distribution more accurately reflects actual truck travel patterns in California.

- *Revised Break Wear PM Emission Factors*

EMFAC has been modified to account for true brake counts. Previously a single emission factor for brake wear, based on a 1983 study,[8] was used to calculate the amount of airborne dust attributable to break wear (12.8 mg/mile). This emission factor

assumed that all vehicles were equipped with four brakes, even if the vehicle had more than four brakes.

- *On-road Fuel Correction Factors*

Fuel correction factors are used to reflect the impact on emissions of commercial fuels compared to the fuel used during the certification process. Modifications to the fuel correction factors (FCFs) were incorporated into EMFAC2007 for both diesel and gasoline. For example, the FCFs for Phase II reformulated gasoline (RFG) were modified for the 1996-2003 calendar years to be cumulative to the Phase I (1992-1995 calendar years) values. Additionally, the impacts of ethanol on evaporative processes, changes in sulfur and aromatics composition in fuel, exhaust hydrocarbon benefits for clean diesel, and an out-of-state diesel fueling rate of 10 percent were incorporated.

- *Revised Planning Humidity Profiles*

Meteorological conditions impact the emissions process in vehicles, therefore, EMFAC2007 incorporates ambient relative humidity profiles to determine NO_x conversion in exhaust as well as air conditioner usage by automobile drivers. Previously, EMFAC used annual average daily relative humidity profiles for each county or geographical area in the State. EMFAC2007 now incorporates hour-by-hour temperature, relative humidity, and ozone concentration data from 700 stations for the years 1996-2004.

- *Revised Planning Temperature Profiles*

EMFAC2007 contains daily ambient temperature profiles for use in evaluating evaporative emissions and other heating/cooling related processes. In the previous EMFAC, hourly temperature observations collected on high ozone days were spatially distributed by zip code and weighted by population. The resulting weighted profiles seemed rather cool. Weighting in EMFAC2007 is done by vehicle miles traveled (VMT) and provides more representative temperature profiles.

- *Corrections to Heavy-duty Gas Cap Benefits*

In reviewing the gas cap benefits staff noticed reductions on hydrocarbon emissions were negligible for heavy duty gasoline vehicles. Further review revealed the gas cap benefits were not fully implemented in EMFAC. In EMFAC2007, the gas cap algorithm has been implemented for heavy duty vehicles.

- *Coding Corrections*

Several coding errors have been corrected which results in a minor change to emissions estimates.

<u>Other Mobile</u>

The following measures are reflected in OFFROAD2007 or the external modules. For a more thorough discussion on improvements to the other mobile inventory, please refer to the tech memos at http://www.arb.ca.gov/msei/msei.htm.

- *Addition of Tier 4 Emission Factors to Off-Road Large Compression Ignition Engines (>25 hp)*

The previous OFFROAD model only provided emission factors based on Tier 0, 1, 2 and 3 emission standards for compression-ignited engines greater than 25 horsepower (hp). In 2003, Tier 4 emission standards were adopted by ARB and the OFFROAD model has been updated to incorporate these new standards.

- *Off-road exhaust emissions inventory fuel correction factors*

Fuel correction factors have been modified to be consistent with EMFAC and to take into account current reformulated gasoline impacts. Carbon monoxide fuel correction factors for summertime and wintertime fuel which vary geographically, and the benefits of ultra low sulfur diesel (requirement commencing in 2007) were applied.

- *Addendum to Evaporative Emissions*

The current version of the OFFROAD model includes an updated estimate of the evaporative emissions from large spark-ignited engines, including those used in recreational marine applications.

- *Revisions to the Diesel Transport Refrigeration Units (TRU) Off-road Inventory*

TRU emissions are calculated in the OFFROAD model as a function of emission rate, population, activity, average horsepower, and load factor. With the exception of the emission rates, all other factors were based on the 1997 Power Systems Research (PSR) report. Since late 2002, ARB has obtained more up-to-date population and activity estimates from surveys of TRU manufacturers. These results have revised the input factors of population, activity, load factor, average horsepower, growth factors, survival rates, and useful lifetime estimates to the OFFROAD model.

- *Estimation of the Impact of Ethanol on Off-Road Evaporative Emissions*

Since the phase out of methyl-tert-butyl ether (MTBE) as a gasoline additive in 2004 ethanol (EtOH) has been used as an additive to meet the required two percent oxygen content in commercially dispensed gasoline. Because MTBE and EtOH both contained two percent oxygen, their evaporative emissions were assumed to be similar. However, recently completed studies indicate this is not a correct assumption. These tests indicate that EtOH has much higher permeation rates through fuel tank walls, hoses and fittings. OFFROAD2007 reflects these findings.

- *Recreational Marine*

Growth factors and engine-to-boat ratios were updated with more recent DMV and National Marine Manufacturers Association (NMMA) data. Additionally, evaporative emissions are separated into operating and storage emissions.

- *Agricultural*

Based on findings from the Agricultural Advisory Committee, growth factors for the San Joaquin Valley were updated.

- *Recreational Vehicles*

The OFFROAD model has been modified to account for updated population for MC, All Terrain Vehicles (ATVs) and snowmobiles using Department of Motor Vehicles (DMV) calendar year 1991-2005 totals. Human population data from Census 2000, personal income, and median household income data from Department of Finance were also applied to develop the growth rate for recreational vehicles. DMV 2005 registration data has been used to update county allocation factors. In addition, DMV registration also shows the inactive population for MC, ATV and snowmobile. Thus, the diurnal and resting emissions for inactive population for these three equipments are included in the OFFROAD2007. Also, the activity and load factor for snowmobile were updated to be the same as U.S. EPA's NONROAD model. Activity results from U.S. EPA's NONROAD model for specialty vehicles, benefits of golf carts and specialty vehicles subject to small off-road engine and large spark ignition (LSI) controls, benefits of snowmobiles subject to the U.S. EPA's capping standard, and the addition of OFMC and ATV evaporative emission factors as grams per mile were calculated in OFFROAD2007.

Although the overall statewide emissions from recreational vehicle are the same, the distribution of emissions to the specific county/air basin/air district has been changed relative the location where the equipment is stored or operated. The storage allocation is relevant to the diurnal and resting emissions from active and inactive recreational vehicles and is based on the county of DMV registration. The operational allocation applies to exhaust, hot soak and running loss emissions and represents where the off-road trails are located.

- *Construction and Ground Service Equipment (D> 25 horsepower)*

The OFFROAD model was updated with population, useful life, age distribution, annual activity, growth data and a deterioration rate cap introduced based on the 2003 McKay & Co. Study, ARB's 2005 Off-Road Diesel In-Use Equipment Survey, ARB's 2006 Off-Road Diesel In-Use Mini Survey, 2003 TIAX Survey of Public Fleets, and input from industry and stakeholders in public workgroup meetings and workshops.

- *Small Off-Road Equipment (SORE)*

The OFFROAD model was updated with: new exhaust and evaporative standards; new population and activity estimates for residential lawn and garden equipment obtained from the Lawn and Garden Survey; new population estimates for commercial lawn and garden equipment from an ERG survey; and modified small off-road engine survival rate curves using information from the Outdoor Power Equipment Institute.

The following changes were made to external modules:

- *Changes to the Locomotive Inventory*

Locomotive growth factors were revised in the OFFROAD model based on new data that better reflected locomotive operations, including projected growth in intermodal freight traffic, both domestic and international, U.S. industrial production, and various railroad statistics available from the Association of American Railroads (AAR). Other

measures such as the 1998 South Coast and 2005 State memorandum of understanding were also reflected.

- *Cargo Handling Equipment*

A separate methodology for cargo handling equipment at the ports and inter-modal rail yards per the Cargo Handling Equipment Air Toxic Control Measure (December 2005) was incorporated.

- *Ocean Going Vessels*

The OGV inventory reflects updated population and activity data for ocean-going vessels statewide. The emission estimates were developed for main and auxiliary engines in eight vessel types (auto carrier, bulk cargo, container, general cargo, passenger, reefer, roll-on roll-off and tankers). In addition, methodology was developed to allocate statewide emissions to individual ports and districts. The ARB regulation requiring vessels with auxiliary engines to switch from heavy fuel oil to marine distillate within 24 nautical miles of California was incorporated into the inventory.

- *Commercial Harbor Craft*

The commercial harbor craft inventory was revised with a single statewide approach. OFFROAD emission factors were used to calculate emissions and adjusted to better reflect the “E3” test cycle which is more representative of marine engines.

- *Portable Fuel Containers/Gas Cans*

Emission estimates were developed from data such as percentage of household/businesses with cans, average cans per household/business, average volume of cans, and refill frequencies collected during two surveys in 1998 and 2004. Allocation factors and growth rates for residential gas cans are based on the Department of Finance's Census 2000 data and landscaping employment growth projected by EDD (California Employment Development Department).

Biogenic

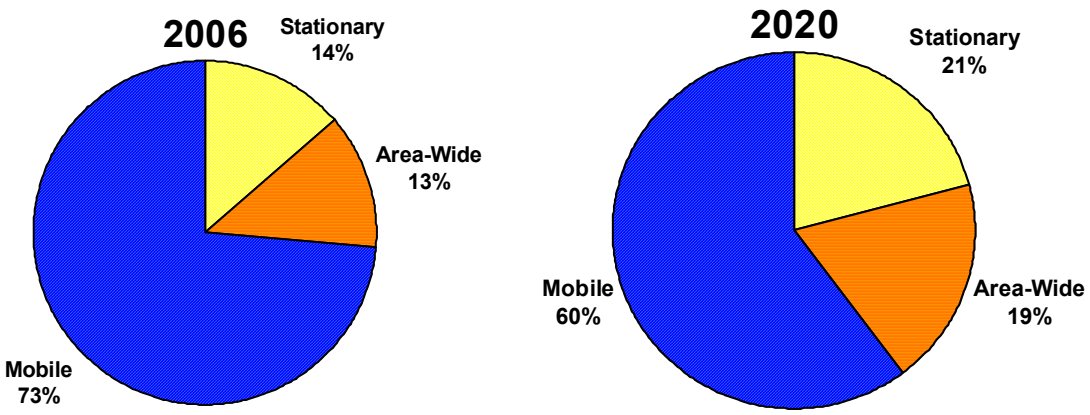
After its original application to the Southern California Ozone Study domain, the biogenic emission inventory GIS (BEIGIS) model was expanded to the Central California Ozone Study/California Regional Particulate Air Quality Study domain. In order to represent central and northern California conditions during summer and winter seasons, the BEIGIS model has incorporated further inputs, such as crop Geographic Information System (GIS) data for central and northern California developed by the California Department of Water Resources (DWR). Because it is a statewide land use/land cover database, the Gap Analysis Program (GAP) is still used to represent natural areas in the model. Urban vegetation survey data for Fresno, Oakland, and Sacramento were compiled from several studies and used to develop urban land use biogenic volatile organic compounds (BVOC) inputs for other urban areas in the central and northern California portion of the model. Crop BVOC and leaf mass factors for additional crops listed in DWR crop GIS databases were compiled from literature. Crop calendars developed by the University of California-Davis Department of Agricultural

and Resource Economics were consulted in order to develop growing season and dormant season crop BVOC inputs. In-leaf and off-leaf season BVOC profiles were also developed for natural and urban areas, in order to account for the presence of deciduous and evergreen species in landscapes. A 1 km^2 resolution winter Leaf Area Index (LAI) raster derived from Advanced Very High Resolution Radiometer (AVHRR) satellite data[9] was used in order to account for winter dormancy in natural areas and croplands.

3. Emissions Estimation Methods and Documentation

Major NOx/ROG Categories

Mobile sources account for about 75 percent of ozone precursor emissions (ROG and NOx) in the State in 2006 and will continue to dominate the inventory in 2020, however total emissions from all sources will drop 28 percent from 5,924 tons/day to 4,237 tons/day.



Emissions Inventory for ROG and NOx by Category Statewide 2005 and 2020

Emissions Estimation Methods

Stationary Emissions

Stationary emission sources identified on an individual basis or a single source are called point sources. Emissions from point sources are estimated from facilities that emit more than ten tons per year of any criteria pollutant. They are identified by name and location. A facility may have many individual, identifiable sources of emissions or (points) of emissions. For example, a coffee processing facility may have a boiler, roaster, grinder, and packing station as emission points. In addition, a point source may have one or more processes or operation. For example, a boiler burning natural gas part-time and oil part-time is considered to have two processes because emission rates are different for the two fuels.

The emissions for each point are computed as the product of use factor (an indicator of the extent of the activity per unit time) and an emission factor (the quantity of pollutant emitted per unit of the use factor). Point source use factors usually relate to a process rate, such as the amount of fuel oil consumed in a boiler or the amount of asphalt concrete produced at a batch plant. The general equation used to calculate the emissions is shown below:

EMS =PR x EF x CONV

Where: EMS = Emissions (tons/year)
PR = Process Rate or activity data in (SCC unit/year)
EF = Emission factor (mass/SCC unit)
CONV = Unit conversion factor

Emission factors are derived from tests that relate emissions to the process causing the emissions. When adequate source test data are available for a source, these data are used to derive emission factors for the emission calculations. When adequate source test data for a source are not available, an alternative is to use average emission factors for similar emitting sources. These factors are usually derived by averaging the results of many tests of similar sources. Such factors are published by federal U.S. EPA in Compilation of Air Pollutant Emission Factors. The published emission factors in AP-42 are usually calculated for devices without control equipment. Because controls may very among different facilities, it is therefore necessary to adjust the emissions factors to account for the specific control equipment being used.

In the base year emission inventory, controlled emissions are estimated by applying control efficiency factors to the “uncontrolled” emissions. These base year control factors take into account operational upsets and equipment malfunctions that lead to excess emissions. The resulting “controlled” inventory represents the actual emissions that have occurred over the 365 day calendar year. Due to the wide variation in how districts account for these operational fluctuations, rule effectiveness is not accounted for as an explicit reporting variable in CEIDARS, rather, rule effectiveness is treated as an implied variable maintained by the districts as part of the actual “controlled” emission estimates that are submitted to ARB.

In some cases, it is possible to determine emissions using a materials balance which reconciles the amounts of materials that enter and leave a process. This method is used for many sources, such as painting processes, where it is assumed that all the solvent used in the coating eventually evaporates.

The source information along with activity data and emission factors used to calculate emissions for all point sources are kept in district’s files and are reported to ARB on a regular basis (generally once a year).

Data Acquisition

Information on emissions from stationary sources is obtained primarily from the districts which have primary responsibility under state law (Health and Safety Code section 40000) for regulation of stationary sources of air pollution.

In developing the emission inventory, there is considerable interaction between ARB and the districts. The planning process for an inventory development starts with the assessment of needs and requirements. Following the initial inventory planning, ARB collaborates with districts to prepare inventory development schedules and updates to the inventory.

Area-wide Emissions

Area source methodologies are used to calculate emissions from aggregated point sources and area-wide sources. Aggregated point sources are many small point sources, or facilities, that are not inventoried individually but are estimated as a group and reported as a single source category. Examples include gas stations and dry cleaners. Because many of these sources are already accounted for as facilities or point sources (see the previous section on Stationary Emissions), the area source emissions are reconciled with point emissions before being added to the emission inventory. For example, the area source methodology for dry cleaners is used to calculate the total emissions for a particular county. These area source emissions are then reconciled by subtracting the emissions for dry cleaners already accounted for in the point source inventory.

Area-wide sources include source categories associated with human activity and emissions take place over a wide geographic area. Consumer products and unpaved road dust are examples of area-wide sources.

Both ARB and districts share responsibility in updating the various area-wide source categories. Some categories are the responsibility of the district while other categories are ARB's responsibility. ARB methodologies and many of the districts methodologies can be accessed at http://www.arb.ca.gov/ei/areasrc/index0.htm.

Data Acquisition

When ARB develops an area-wide source methodology, many possible sources of activity data and emission factors are considered. Often data are obtained during the development of regulations. For example, in developing consumer product regulations, ARB routinely conducts statewide surveys. Research studies, some of which are sponsored by ARB, are another source of emissions data. Finally, various state and federal agencies may have relevant data needed to estimate emissions.

If activity data are not available at the county level, then statewide emissions are apportioned to counties using a surrogate. In the case of consumer products, statewide emissions are apportioned to counties using population.

Once ARB has developed a draft methodology, it is submitted to Emission Inventory Technical Advisory Committee (EITAC) for review. EITAC is composed of emission inventory staff from the districts, ARB, and U.S. EPA. Following EITAC review and incorporation of recommended changes, the methodology becomes final and, where appropriate, emissions are reconciled with the point source inventory. Finally, process rate and emissions transaction format files are prepared and the CEIDARS database is updated.

The districts also provide updated emissions data to ARB. Process rate and emissions transaction format files provided by the districts are used to update the CEIDARS database. When they are provided, the methodologies developed by districts are reviewed by ARB.

CEFS Forecasting Algorithm (Used for Stationary, Area-wide, Aircraft, and Ships)

The general forecasting equation for stationary sources is shown below. The CEFS processor calculates seasonal projections for planning and month/day specific projections for photochemical modeling inputs. CEFS employs a region and emission category selection hierarchy when selecting and applying growth and control factors. Consider, for example, a rule which applies to the entire universe of a particular process type (identified by source classification code (SCC)). If that rule is more stringent for a particular industry (identified by SIC), then a control profile specific to the SCC/SIC combination can be assigned. CEFS will cycle through the control data records applying the highest level of the selection hierarchy to that category (i.e. the growth and control data can be "layered" to target the source categories exactly as the rule calls for without double-counting (or overlaps). The same type of logic is used for the growth data.

$$E\_fy_{(r,s,p,y)} = E\_by_{(r,s,p,o)} \cdot TF_{(r,s)} \cdot FRAC_{(r,s,p,y)} \cdot GF_{(r,s)} \cdot [CF_{(r,m_1,s,p)} \cdot CF_{(r,m_2,s,p)} \cdot \ldots \cdot CF_{(r,m_i,s,p)}]$$

where

Primary Variables:

- E_fy = Emissions in the future year (tons/day; annual average or seasonal)
- E_by = Emissions in the base year (tons/year)
- TF = Temporal Factor (or "Seasonal Adjustment Factor")
- FRAC = ROG, VOC, PM_{10} , or $PM_{2.5}$ fraction (if applicable)
- GF = Growth Factor (is the ratio of two activity levels at the end-point years)
- CF = Control Factor (is the ratio of two control levels at the end-point years)

Subscript Variables:

- r = region (district, air basin, county)
- s = the source category (SCC/SIC or EIC for the TREND algorithm; The GIS algorithm performs the projections at the facility level.)
- p = the pollutant
- m = the control measure (i = the i^{th} control measure)
- y = the year to be projected
- o = the base year

Temporal Factors (Stationary and Area Sources Only)

To better characterize emissions affected by seasons, seasonal adjustment factors (or "temporal factors") are used to apportion emissions into the periods under consideration. The temporal algorithm used for calculating seasonal emission inventories was rewritten to better approximate the seasonal variation of emissions. In the prior algorithm used in the 1994 SIP, emission estimates for point sources represented an "average annual operating day". The assessment of this algorithm showed that it did not accurately estimate seasonal emissions because the algorithm was driven by the number of operating days a point source process operates. For processes that operated intermittently, this resulted in exaggerated seasonal emission estimates because the algorithm assumed that all intermittent processes operated simultaneously. For area sources, the prior algorithm estimated emissions based on an "average seasonal operating day".

ROG, VOC, PM_{10} and $PM_{2.5}$ Fractions

The reactive portion of the total organic gas (TOG) emissions (expressed as ROG) are calculated by applying reactive fractions which are maintained in CEIDARS. Districts may supply fractions at the facility/device/process level for point source processes. If these data are not provided at this level, default fractions maintained by ARB at the SCC level are invoked. In like manner, the portion of PM falling within the 10 micron and 2.5 micron size ranges (i.e. PM_{10} and $PM_{2.5}$ respectively) are estimated from district-supplied fractions or by applying size fractions maintained by ARB in CEIDARS. As with the temporal factor, an emission-weighted fraction is developed for each SCC/SIC pair.

Growth Factors (Stationary and Area Sources Only)

Growth factors are derived from county-specific economic activity profiles, population forecasts, and other socio/demographic activity. Growth profiles are typically associated with the type of industry and secondarily to the type of emission process. For point sources, economic output profiles by industrial sector are typically linked to the emission sources via SIC. For area sources, other growth parameters such as population, dwelling units, fuel usage etc. may be used. The growth factor is the ratio of the growth level in the future year to the growth level in the base year. These growth levels are also region and source category dependent.

Data Acquisition

Growth factor data for use in CEFS are acquired from the districts, and where no data are available, growth activity projections are constructed from ARB contracts[10] with experts in the economic and demographic growth. ARB may also develop growth estimates in consultation with stakeholders. For example, ARB led an effort to revise growth assumptions in agricultural categories, under guidance of the State's Agricultural Advisory Committee. Geographically speaking, much of the State relies on these constructed growth projections while other high emission regions, such as the South Coast and Bay Area, submit their own growth estimates based on data provided by

local councils of government (COGs). The varied sources of growth data are assembled into a comprehensive statewide growth data set that can be used for statewide emission projections.

Control Factors

Control factors are derived from "adopted" ARB regulations, district rules, and "proposed" measures which impose emission reductions or a technological change on a particular emission process. Control factors comprise three components: Control Efficiency, Rule Effectiveness, and Rule Penetration. Control factors are closely linked to the type of emission process and secondarily to the type of industry. Control levels are assigned to emission categories which are targeted by the rules via emission inventory codes (SCC/SIC, EIC etc.) used in CEIDARS. The control factor is the ratio of the control level in the future year to the control level in the base year. These control levels are also region, control measure, source category, and pollutant dependent.

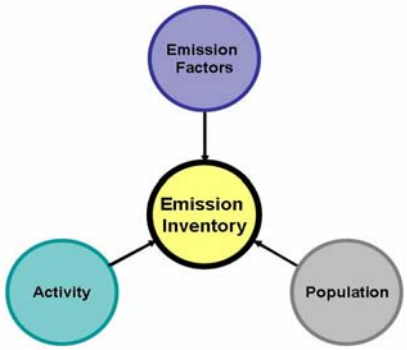
Data Acquisition

The baseline emission projections require a full complement of control factor data that account for the "adopted" rules that are on the books by a predetermined cutoff date. A major component of the CEFS program is its ability to link rules to targeted emission categories and quantify the emission reductions associated with the rules. Implementation of CEFS requires districts to submit local control rule profiles (for all rules leading to emission reductions) that link the rules to the appropriate emission categories. The profiles must describe the behavior of the rule (i.e. whether the rule is phased in a linear fashion or abrupt implementation in the form of a step function). The rule profiles must be designed to be pollutant specific and must carry enough data points to adequately characterize the rule over the implementation period. The CEFS program interpolates the profile for intermediate years in either a step or linear mode depending on what the district has flagged for the rule. The construction of a comprehensive control rule data set for a large district is a sizeable undertaking. Some districts develop the control profiles in house, while others have opted to contract the work out. In either case, ARB staff work closely with the district staff and/or contractors to educate staff on the proper construction of the control profiles. In gearing up for the 8-Hour Ozone SIP, in Fall 2004, ARB conducted a special forecasting workshop to provide guidance to districts on all aspects of the emission forecasting program including presentations on forecasting logic and input data requirements. In most cases, districts responded by submitting rule-specific control profiles for their adopted rules as required.

ARB also develops control profiles for state rules and International Maritime Organizations (IMOs) such as for consumer products, pesticides, architectural coatings, and ships. For state rules, ARB deploys interdivisional teams to develop, refine, and finalize the control profiles to be used in SIP projections. Similar data requirements exist for the development of these control profiles as described above for district rules.

Mobile Sources

Mobile sources include all non-stationary sources of air pollution such as cars, trucks, motorcycles, buses, airplanes, and locomotives. In general, emissions are calculated as the product of the number of sources population/volume), activity and emission factor.



$$E = Pop * A * EF$$

where,
E = pollutant specific emissions [mass emitted per unit time]
Pop = population of on-road mobile sources [-]
A = activity (travel data) [e.g. miles traveled per day, or hours operational]
EF = source specific emission factor [mass per unit activity]

In California, most mobile source inventories are estimated by two mathematical modeling tools: EMFAC for on-road sources and OFFROAD for off-road sources. Because many different types of data are necessary to develop an inventory, ARB must rely on other organizations to provide that data. The inventory has involved the efforts of the California Air Pollution Control Officers Association, CalTrans, the Southern California Council of Governments (SCAG), and the DMV. CalTrans provides SCAG with information regarding highway projects so that they can estimate and project vehicle miles traveled (VMT) from their Travel Demand Model (TDM). This activity data are then coupled with the emission factors generated from ARB's Emission Factor Model (EMFAC2007) and population data provided by the DMV to calculate the emission inventory. Finally, all statewide emission inventories are assembled and maintained by ARB in the CEIDARS and CEFS databases.

On-Road Emission Inventory

EMFAC contains several different modules that account for different portions of the on-road inventory calculation process. EMFAC covers on-road mobile sources including gas and diesel cars, trucks, buses, and motorcycles. The subsequent sections illustrate the methods by which the on-road emission inventory is developed. For more detailed information please refer to the ARB website at http://www.arb.ca.gov/msei/onroad/on-road.htm. A guide to online documentation is also provided at the end of this section.

Source Categories

On-road mobile sources are categorized into thirteen vehicle classes, two fuel types (gas and diesel), and three technology categories (catalyst, noncatalyst and diesel) as indicated in the table below.

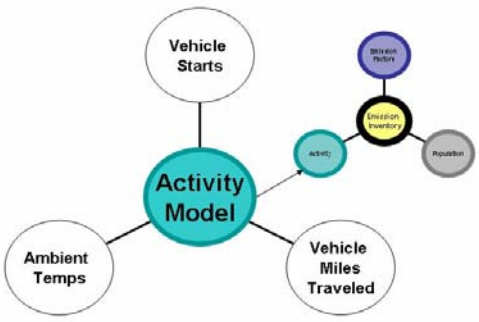
EMFAC Vehicle Categories

Class	Description	Weight (GVW)	Abbreviation	Technology Group
PC	Light Duty Autos (Passenger Cars)	All	LDA	NCAT, CAT, DSL
T1	Light-Duty Trucks (LDT1)	0-3,750	LDT1	NCAT, CAT, DSL
T2	Light-Duty Trucks (LDT2)	3,751-5,750	LDT2	NCAT, CAT, DSL
T3	Medium-Duty Trucks	5,751-8,500	MDV	NCAT, CAT, DSL
T4	Light-Heavy Duty Trucks (LHDV1)	8,501-10,000	LHDT1	NCAT, CAT, DSL
T5	Light-Heavy Duty Trucks (LHDV2)	10,001-14,000	LHDT2	NCAT, CAT, DSL
T6	Medium-Heavy Duty Trucks (MHDV)	14,001-33,000	MHDT	NCAT, CAT, DSL
T7	Heavy-Heavy Duty Trucks (HHDV)	33,001+	HHDT	NCAT, CAT, DSL
UB	Urban Bus (UB)	All	UB	CAT, DSL
OB	Other Bus		OBUS	CAT, DSL
SB	School Buses	All	SBUS	CAT, DSL
MH	Motor Homes	All	MH	CAT, DSL
MC	Motorcycles	All	MCY	NCAT, CAT

Population and Activity

In general, population data are obtained from vehicle registration data compiled by DMV and classified according to fuel, class, technology group, age (model year) and geographic area. Further calculations require data on population growth rates by calendar year, vehicle class, fuel type and geographic area. These estimates are coupled with activity data and emission factors, as indicated previously, to estimate total emissions.

On-road *activity* refers most commonly to vehicle miles traveled, speed, and number of trips for each vehicle type and model year.



Vehicle Miles Traveled

Vehicle miles traveled (VMT) are the number of miles traveled by a given vehicle in a specified time period and is estimated from the inspection and maintenance program (I&M) where the model year and odometer reading is taken. The COG's provide VMT as estimated by their transportation demand models. EMFAC then matches VMT estimated in the model to those values provided by the COGs.

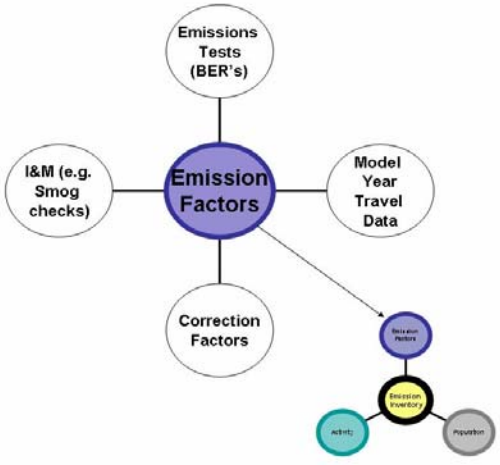
This analysis is completed for each county and helps to elucidate regional differences in travel. VMT is calculated based on the vehicle population and accrual rates by age, vehicle class, fuel type, by geographic and inspection and maintenance option. The model also contains hourly distributions of VMT by class.

Vehicle Starts or Trips
Vehicle starts are obtained for gasoline-powered vehicles except heavy-duty trucks and included as an input to the inventory. Starts are used to calculate trip emissions and calculated as the product of a per-vehicle start rate (starts per vehicle per day) and the fleet population. The estimates of trips per day are based on travel surveys and vehicle instrumented data for passenger cars, and light and medium duty trucks.

Ambient Temperatures
Because motor vehicle emissions are dependent on temperature and humidity profiles, historical meteorological data are compiled. The emission inventory process includes data on averaged monthly, summer and winter episodic diurnal temperatures for each geographic area as well as averaged monthly relative humidity for each geographic area. The following table indicates the primary data sources for activity and population:

Emission Factors

Emission factor used in EMFAC are based on emission tests with dynamometers coupled with certification data yield base emission rates (BERs) that are adjusted with correction factors, and vehicle inspection and maintenance (I&M) programs (e.g. smog check scenarios). Correction factors are applied for non-standard operating conditions such as what mode the vehicle is in (e.g. hot/cold/start/running), trip speed, environmental conditions, and inspection and maintenance programs within that geographic area. These correction factors include, but are not limited to, speed correction factors, temperature correction factors, fuel correction factors and driving cycle correction factors. Emission factors are provided for different temperatures, operating speeds, emission modes, model types, model years, technology types, fuel, and relative humidity. These emission factors can be expressed as grams per vehicle, grams per mile, grams/hour and grams per start. Activity data are matched to the corresponding emission factor to estimate total emissions.



EMFAC includes tailpipe exhaust and evaporative emissions as part of the on-road inventory. Tailpipe exhaust emissions include running, idle and start exhausts. Running exhaust represents emissions released from the tailpipe under hot stabilized conditions, while idle and start exhaust, the other tailpipe emissions, include any emissions associated with idling and starting the vehicle. Evaporative emissions consist of hot

soaks, diurnals, resting losses and running losses all of which are generated by the evaporation of fuel from an engine. The inventory accounts for particulate matter (PM) associated with tire and break wear.

Guide to Online Documentation

"Understanding the On-Road Emissions Inventory Program" - http://www.arb.ca.gov/msei/onroad/on-road.htm

Mobile Source Emission Estimates - http://www.arb.ca.gov/msei/onroad/emfac2002_output_table.htm

Previous Model Versions and Revisions - http://www.arb.ca.gov/msei/onroad/previous_version.htm, http://www.arb.ca.gov/msei/onroad/latest_revisions.htm

EMFAC Technical Support Documentation - http://www.arb.ca.gov/msei/onroad/doctable_test.htm

Tech Memos - http://www.arb.ca.gov/msei/msei.htm

Other Mobile Emission Inventory

Off-road mobile sources include off-road vehicles such as boats, outdoor recreational vehicles (ORV's), industrial and construction equipment, farm equipment, lawn and garden equipment, ships, aircraft, and trains. OFFROAD is used to estimate emissions for most of these categories. Other sources such as ocean going vessels and commercial harbor craft are based on calculations in modules external to OFFROAD. Off-road emissions are calculated much in the same way as on-road emissions – the product of emission factor, activity, and population. The model also incorporates elements such as technology types, population, activity, horsepower, load factors, and control factors. For more detailed information please refer to the ARB website at http://www.arb.ca.gov/msei/offroad/off-road.htm. In addition, a guide to online documentation is provided at the end of this section.

Source Categories

Off-road sources are divided up into eight major categories: aircraft, trains, ships and commercial boats, recreational boats, off-road recreational vehicles, off-road equipment, farm equipment, and fuel storage and handling. The categories are then subdivided by fuel type, engine type, horsepower group and preempted or non-preempted status to better characterize emissions, adopted and proposed control strategies, and use. Outlined below are a few categorical descriptions.

Commercial Marine Vessels

Commercial marine vessels include ocean-going ships and harbor craft, but exclude recreational vessels. Ocean-going ships include international trade vessels such as container ships, bulk carriers, general cargo ships, tankers, and auto carriers. Passenger cruise ships, and some military and Coast Guard vessels, are also included in this category.

The diesel engines powering the majority of oceangoing ships are referred to by U.S. EPA as "Category 3" engines, meaning they have a displacement greater than 30 liters per cylinder. These engines are available in configurations with 4 to 14 cylinders, and power outputs ranging from roughly 5 to 100 megawatts.

Ocean-going ships generally run boilers and diesel generators in addition to propulsion engines, particularly while "hotelling" in port. Diesel generators provide electrical power for lights and equipment, and boilers provide steam for hot water and fuel heating.

Most ocean-going ships run their main propulsion engines (and many newer ships also run their auxiliary engines) on intermediate fuel oil (IFO 180 or IFO 380). This fuel is also referred to as "bunker fuel," and requires heating to reduce its viscosity to a point where it can be properly atomized and combusted. Bunker fuel typically contains much higher levels of sulfur, nitrogen, ash, and other compounds which increase exhaust emissions. Diesel-powered gas turbine engines and auxiliary engines on many ocean-going ships use lighter "distillate" diesel fuel (also referred to as marine gas oil), which is much lower in sulfur and other contaminants.

Harbor craft (or the "captive fleet") include tugboats, commercial fishing vessels, commercial passenger fishing vessels, work boats, crew boats, ferries, and some Coast Guard and military vessels. These vessels generally stay within California coastal waters and often leave and return to the same port. Most harbor craft use diesel-powered propulsion and auxiliary engines that generally run on distillate diesel fuel.

Locomotives and Rail-yards

Railroads operate national locomotive fleets that travel between states daily, currently moving more than 40 percent of the total intercity revenue ton-miles of freight in the United States.

Compression-Ignition (diesel) Engines

Off-road compression-ignition (CI) engines are diesel engines primarily used in farm, construction, and industrial equipment. Examples include tractors, excavators, dozers, scrapers, portable generators, transport refrigeration units (TRUs), irrigation pumps, welders, compressors, scrubbers, and sweepers. Locomotives, commercial marine vessels, marine engines over 37 kilowatts (kW), or recreational vehicles are excluded from this category.

Large Spark-Ignition Engines

The large spark-ignition engine (LSI) category consists of off-road spark-ignition engines greater than 25 horsepower and typically fueled by gasoline or liquefied petroleum gas (LPG). A small number are fueled by compressed natural gas (CNG), and some have dual fuel capability. LSI engines are most commonly found in forklifts, specialty vehicles, portable generators, pumps, compressors, farm equipment, and construction equipment. This category excludes marine propulsion engines, engines used in equipment that operate on rails, recreational vehicles, snowmobiles, and gas turbines.

Recreational Vehicles

This category consists of off-road motorcycles and all terrain vehicles (ATVs), both of which are designed for operation over rough terrain. U.S. EPA standards for exhaust and evaporative for off-road motorcycles and ATVs were established in 2006. Although the federal exhaust standards are not as stringent as California's, California will benefit from the evaporative standards which control fuel tank and fuel line permeability.

In 1994, ARB approved off-highway recreational vehicle regulations (including off-road motorcycles). These regulations established exhaust emission standards and test procedures that included off-road motorcycles and ATVs. The regulations also provided specific coding requirements of the vehicle identification number to distinguish an emission-compliant vehicle. In 1998, the regulations were amended to link vehicle registration and usage to compliance with California's exhaust emission standards. Those in compliance are eligible for off-highway vehicle (OHV) green sticker registration that allows year-round operation in designated off-road areas. Those not in compliance are eligible for OHV red sticker registration that allows operation only during designated months when ozone levels are low. These revisions affect engines built in 1997 greater than 90 cc. The same standards also apply to engines built in 1999 of 90 cc or less. Engines built pre-1997 and pre-1999, respectively, are not subject to this regulation.

Small Off-Road Engine (SORE)

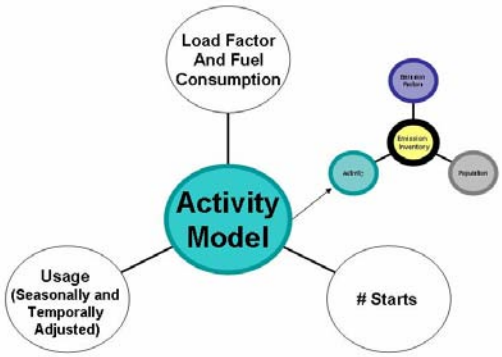
The small off-road engine (SORE or "small engine") category consists of off-road spark-ignition engines fueled typically by gasoline, liquid petroleum gas (LPG) or other alternative fuels and below 25 horsepower. The SORE category includes lawn, garden and other maintenance utility equipment. Within this category, engines are typically grouped by engine displacement measured in cubic centimeters (cc). Engines under 65 cc displacement are traditionally associated with handheld equipment such as weed trimmers, leaf blowers and chain saws. Engines greater than 65 cc displacement are collectively referred to as non-handheld small off-road engines. Non-handheld equipment is primarily lawn mowers, but also includes other equipment such as riding mowers and generator sets.

The sources of evaporative emissions from this category are from gasoline vapors vented from the carburetor and fuel cap and occur from diurnal (emissions due to daily temperature changes), hot soak (occur after shutdown of equipment), and running loss (occur during equipment operation) processes. Permeation (liquid gasoline migrating through the walls of plastic fuel tanks) is also another source of emissions.

Activity and Population

As with the on-road inventory, emission factors must be coupled with population and activity data to estimate total emissions. The statewide equipment population of off-road mobile sources was collected from a variety of sources including industry and government agencies. Then growth factors based on socioeconomic indicators and scrappage factors were applied to determine future populations. Scrappage, or attrition, functions describe the relationship between equipment age and the proportion of equipment that has been removed from service. It is expressed as a fraction of the average lifetime of the equipment and is a function of the expected life of the engine, the annual hours of operation, and the average load factor.

Activity includes information such as annual average usage hours, load factor, brake-specific fuel consumption, and starts per year for each equipment type by fuel, engine type, and horsepower group.



Data Acquisition

The statewide equipment populations were obtained through various industry and government agency sources. Power Systems Research (PSR) is the source for many of the state population estimates for off-road categories. PSR's Power Systems Research/Compass International's 1996 Database contained engine data compiled over the last 7 years, and included engine sales records for every engine installed in North America, as well as imported engine-driven products. Engine data includes horsepower, model number and engine description (number of cylinders, turbocharged versus naturally-aspirated, displacement, etc). Some of the principal data sources, by category, are listed in the table below:

The Portable Equipment Database is maintained by ARB. Data are obtained through a voluntary registration program with the State as an alternate method of obtaining an operational permit for off-road non-propulsion engines. Equipment populations for dredging, oil drilling, lawn and garden, military tactical support and other portable equipment categories were obtained directly from the Portable Equipment Database. In order to avoid double counting, the population of generators, pumps and compressors found in the drilling, dredging, tactical support and other portable equipment, were subtracted from the industrial and light-commercial categories.

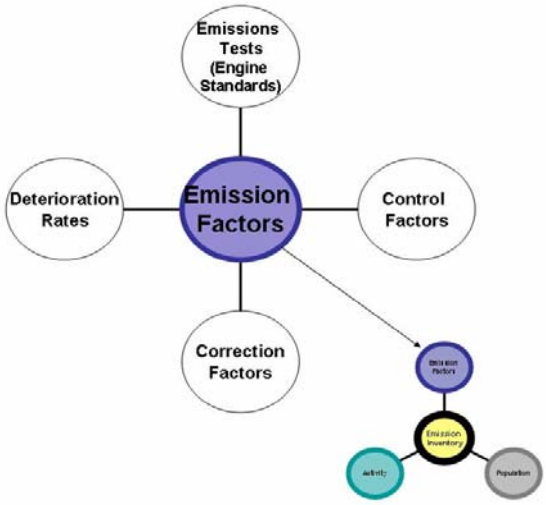
Category	Data Source
Agricultural	United States Department of Agriculture(USDA), Power Systems Research (PSR)
Construction and Mining	MacKay & Company, PSR, Portable Equipment Database, Energy & Environmental Analysis (EEA)
Light Commercial	PSR, Portable Equipment Database
Industrial	PSR, Booz Allen-Hamilton (BAH)
Logging	Power Systems Research
Lawn and Garden	Portable Equipment Database, BAH
Airport Ground Support	Air Transport Association (ATA), EEA
Transport Refrigeration Units	PSR, Department of Motor Vehicles (DMV)
Dredging	Portable Equipment Database
Oil Drilling	Portable Equipment Database
Military Tactical Support Equipment	Portable Equipment Database
Recreational Equipment	Department of Motor Vehicles (DMV)
Pleasure Craft	U.S. Coast Guard, DMV
Commercial and Government Vessels	BAH, US Coast Guard, CA Department of Fish and Game, ARB Survey
Locomotive and Rail Operations	Booz Allen-Hamilton
Aircraft (Commercial, Military and General)	Booz Allen-Hamilton
Agricultural Aircraft	Booz Allen-Hamilton
Ocean-Going Vessels	CA State Lands Commission, Port of Los Angeles EI, Survey, US Army Corp of Engineers, Entec
Agricultural Engines	District Permit Data, Carl Moyer Program, Sonoma Technology, CA Department of Water Resources Farmland Monitoring and Mapping Program

MacKay & Company conducted surveys in 1991, 1995, and 1999 to estimate nationwide construction equipment population and usage. This work was sponsored by Construction Equipment Magazine. MacKay & Company's 1999 Construction Equipment population analysis was used to obtain populations for those construction equipment contained in the analysis. Since data in MacKay's analysis are nationwide, staff used a factor of 10 percent in order to estimate California's statewide population. U.S. EPA staff estimated that 10 percent of the total nationwide dollar amount spent on construction-related activities occurs in California. For specific pieces of construction equipment not found in MacKay's analysis, 10 percent of PSR's nationwide data were used.

Finally, all statewide emission inventories are assembled and maintained by ARB in CEIDARS and CEFS databases.

Emission Factors

ARB estimates all off-road mobile emissions with OFFROAD. OFFROAD integrates emission factors by model year for hydrocarbons (HC), carbon monoxide (CO), carbon dioxide (CO_2), oxides of nitrogen (NO_x), particulate matter (PM), and oxides of sulfur (SO_x). Hydrocarbon emissions are modeled for three types of engine processes: exhaust, evaporative and start emissions.



The emission factors for each engine are a function of new engine emissions expressed in grams per brake horsepower hour and deterioration rates. Deterioration is due primarily to tampering and mal-maintenance and wear on engine parts with use, and occurs at different rates for each pollutant. The OFFROAD methodology for estimating deterioration is based on the zero-hour emission rate (g/bhp-hr), the deterioration rate (increase in emissions per unit of activity, g/bhp-hr^2), and the number of hours accumulated on the equipment. Equipment-specific emission factors are obtained by adjusting the appropriate engine emission rate by how the equipment is used (duty cycle). Finally, control factors can be applied to emissions or population to account for regulatory control scenarios.

Guide to Online Documentation

"Understanding the Off-Road Emissions Inventory Program" - http://www.arb.ca.gov/msei/offroad/off-road.htm

Mobile Source Emission Estimates - http://www.arb.ca.gov/msei/onroad/emfac2002_output_table.htm

Model Revisions - http://www.arb.ca.gov/msei/offroad/updates.htm

OFFROAD Technical Support Documentation - http://www.arb.ca.gov/msei/offroad/pubs.htm
http://www.arb.ca.gov/research/resnotes/notes/97-8.htm

Tech Memos - http://www.arb.ca.gov/msei/msei.htm

Biogenics (Overview of the BEIGIS Model)

Development of effective ozone and PM2.5 control strategies in California requires accurate emission inventories of their precursor emissions, including biogenic volatile organic compounds (BVOCs) such as isoprene and monoterpenes. Due to the heterogeneity of vegetation land cover, species composition and leaf mass distribution in California, quantifying BVOC emissions in this domain requires an emission inventory model with region-specific input databases and a high degree of spatial and temporal resolution. In response to this need, ARB developed a GIS-based model for estimating BVOC emissions, called BEIGIS, which uses California-specific input databases with a minimum spatial resolution of 1 km^2 and an hourly temporal resolution.

The BEIGIS isoprene emission algorithm[11] is of the form $I = IS \times CL \times CT$, where I is the isoprene emission rate (grams isoprene per gram dry leaf mass per hour) at temperature T and photosynthetically active radiation flux PAR. IS is a reference emission factor (grams isoprene per gram dry leaf mass per hour) at a standard temperature of 30 °C and PAR flux of 1000 µmol m^{-2} s^{-1}. CL and CT are environmental adjustment functions for PAR and temperature, respectively. The monoterpene emission algorithm adjusts a reference monoterpene emission factor by a temperature function[11]. Methylbutenol (MBO) emissions are modeled with an algorithm[12] similar to that for isoprene. Dry leaf mass/ leaf area ratios, and reference emission factors for isoprene, monoterpenes and MBO, are plant species-specific and assembled from the scientific literature. Modeled BVOC emissions for a given spatial domain therefore represent the contribution by various plant species (through their leaf mass and emission rates) to the total BVOC emissions.

The main inputs to BEIGIS are land use land cover (LULC) GIS databases, gridded leaf area index (LAI) derived from AVHRR satellite data[13], leaf area/dry leaf mass factors, reference emission factors, and gridded hourly ambient temperature and sunlight data (generated by the CALMET and/or MM5 models). For urban areas, LULC databases were developed from regional planning agency data and botanical surveys[14]. Natural areas are represented using GAP, a statewide LULC database developed by the University of California-Santa Barbara for the U.S.G.S. Biological Resources Division and the California Department of Fish and Game[15]. Agricultural areas are represented using crop GIS databases developed by the California Department of Water Resources (http://www.landwateruse.water.ca.gov). Ground surveys have been funded by ARB to validate vegetation land cover and LAI input databases used in BEIGIS[16]. Model validation using micrometeorological flux measurements is on-going. BEIGIS assimilates spatial and temporal inputs and executes BVOC emission algorithms within a GIS. Outputs from BEIGIS are gridded 1 km^2 hourly emissions of isoprene, monoterpenes and MBO, aggregated to 16 km^2 or 25 km^2 resolution, depending on photochemical modeling requirements. A fourth BVOC category called “other” biogenic VOC (OVOC) is comprised of compounds such as acetone, methanol, and other oxygenated BVOCs. OVOC is not modeled directly. Gridded hourly OVOC emissions are estimated as an added fraction, scaled to 30 percent of the sum of isoprene, monoterpene, and MBO within each grid cell. A speciation profile is applied to the

OVOC fraction based on OVOCs measured at Blodgett Experimental Forest[17]. The BEIGIS model was first applied in the Southern California Ozone Study[18] (SCOS97).

Emissions Inventory Systems Data (CEIDARS, CEFS)

ARB redesigned its base year emission inventory system (known as the California Emissions Inventory Development and Reporting System (CEIDARS)) in 1995 and emission forecasting system (known as the California Emission Forecasting System (CEFS)). Technical papers describing these systems are available on request.

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Appendix G

Legal Authority and Other Requirements

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Overview of California's Legal Authority

Legal authority to regulate sources of air pollution in California is found in both federal and state law. At the federal level, the Clean Air Act ("the Act" or "CAA") calls for a two or three partner endeavor involving federal, state and, where permitted by state law, local authorities. The Act directs the U.S. Environmental Protection Agency (U.S. EPA) to undertake a national effort to improve air quality. To carry out this directive, U.S. EPA is directed to establish national ambient air quality standards to protect the public health and welfare (CAA §109).

The primary tool to be used in the effort to attain national standards is a SIP to be developed by each state that has one or more nonattainment areas. The SIP must provide for implementation, maintenance, and enforcement of the national standards (CAA §110(a)(1)). CAA § 110(a)(2)(A) broadly authorizes and directs states to include in their SIPs:

> "...enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act."

While the Act requires states to develop SIPs, and clearly intends that they bear primary responsibility for attaining the national standards (CAA §101(a)(3)), it also provides U.S. EPA with two significant roles in this process. As a partner in the effort to attain and maintain the standards, U.S. EPA is authorized and directed to adopt measures to control emissions from various sources, such as consumer products, motor vehicles, nonroad engines and vehicles, and aircraft (CAA §§183(e)(3), 202, 213 and 231). Additionally, U.S. EPA has ultimate authority and responsibility to intervene with direct federal action if the SIP is inadequate, incomplete or not properly implemented by the state (CAA §§ 110(c)(1) and 113).

Similarly, California law generally divides responsibility for meeting the requirements of the Clean Air Act (as well as separate, comprehensive state requirements related to air quality) between ARB and local air pollution control or air quality management districts (districts). However, other state or local agencies also have the authority under state law to regulate certain pollutant-emitting sources or activities. For example, the State's motor vehicle inspection and maintenance program is primarily the responsibility of the Bureau of Automotive Repair in the Department of Consumer Affairs, and the Department of Pesticide Regulation has primary authority to regulate the use of pesticides. Legal authority for state, district, and local efforts to improve air quality is contained primarily in Division 25.5 and Division 26 of the California Health and Safety Code, although authority for some programs is located elsewhere in the State codes.[1]

[1]All section references in this discussion are to the Health and Safety Code unless otherwise specified.

Pursuant to these codes, ARB is charged with coordinating, regional and local efforts to attain and maintain both state and national ambient air quality standards. The direct statutory link between ARB and the mandates of the CAA is found in §39602 of the Health and Safety Code, which states:

> "The state board is designated the air pollution control agency for all purposes set forth in federal law.
>
> The state board is designated as the state agency responsible for the preparation of the state implementation plan required by the Clean Air Act (42 U.S.C., Sec. 7401, et seq.) and, to this end, shall coordinate the activities of all districts necessary to comply with that act.
>
> Notwithstanding any other provision of this division, the state implementation plan shall only include those provisions necessary to meet the requirements of the Clean Air Act."

In directing the California approach to improving air quality, State law divides control activities into vehicular and nonvehicular sectors (§§39002 and 40000). The control of vehicular sources is the responsibility of ARB, while primary responsibility for nonvehicular controls falls to the local air districts (§§ 39002, 40000-40002, 40702, 40717; see also §§ 40400-40540 for provisions specific to the South Coast Air Quality Management District). These authorities have been used by the local districts to adopt and enforce numerous rules to control air pollution. In addition, ARB has comprehensive oversight authority over the districts to undertake nonvehicular source control activities if any districts fails to perform satisfactorily (§§39002, 41500, 41502, 41503, 41504, 41505 and 41652).

The Clean Air Act requires that SIP provisions be legally enforceable. Under State law, a tiered system of authority for enforcement exists which parallels the authority to develop and implement the SIP. ARB has authority to enforce vehicular controls. (See, e.g., §§41510, 41511 and 41513, 43012, 43016 and 43017, 43100, 43105, 43106, 43204-43212 and Vehicle Code §§27156, 38390 and 38391.) Primary responsibility for nonvehicular enforcement is vested in the local air districts. (See, e.g., §§41510, 41511 and 41513, and 42300 et seq.) However, if ARB finds that a district is not taking reasonable action to enforce applicable air pollution control statutes, rules and regulations, ARB may, after a public hearing, assume the district's enforcement powers and enforce these laws (§41505). U.S. EPA has similar authority to assume enforcement jurisdiction if a state fails to enforce SIP provisions (CAA §113).

Within the framework of state and local shared responsibility for air pollution control, with ultimate air district accountability to ARB, ARB has the necessary statutory authority to assure compliance with the requirements of the Clean Air Act relating to the attainment of national standards and the rate-of-progress demonstrations.

Legal Authority to Adopt State and Federal SIP Measures

State components of the 2007 SIP are designed to reduce emissions from on-road mobile sources (passenger vehicles and trucks), off-road mobile sources (agricultural equipment, construction equipment, and other off-road sources), goods movement sources, and areawide sources (consumer products and pesticides). The legal authority for implementing the measures in each of these categories is described below.

Mobile Sources

Mobile source measures are a central component of the 2007 SIP. The measures include reductions to be realized from actions taken or to be taken at both the federal and state level.

Federal Responsibility for National Mobile Source Measures

If all areas of the State are to demonstrate attainment by the specified deadlines, a critical part of the overall strategy to reduce mobile source emissions in California must be U.S. EPA's regulation of national sources pursuant to §§202(a)(2)(B), 213 and 231 of the Clean Air Ac (CAA). Projected emissions from sources under federal jurisdiction are very significant, and these emission categories are expected to grow dramatically through 2024 without new strategies. Under these circumstances, U.S. EPA has an obligation under the CAA to promulgate standards for these unregulated or underregulated national sources. Such measures should be fully creditable in the SIP.

Certainly, U.S. EPA has the authority to adopt standards for national sources in order to assist states in achieving the national ambient air quality standards (NAAQS). U.S. EPA's authority derives from a number of provisions of the Clean Air Act which authorize or require the promulgation of various types of control measures. The scope of U.S. EPA's authority under many of these provisions is broadly defined. For example, CAA §202 directs the Administrator of the U.S. EPA to establish emission standards for new motor vehicles and CAA §231 directs the Administrator to establish aircraft emission standards. Both of these sections direct the Administrator to promulgate regulations in order to control emissions:

> "which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health and welfare ..." (CAA §§202(a) and 231(a)(2)).

CAA §213 provides U.S. EPA with the authority to adopt emission standards for nonroad engines and vehicles (such as marine vessels, construction equipment, and farm equipment). Under §213, the Administrator is required to determine whether ozone precursor or carbon monoxide emissions from nonroad engines or vehicles (other than locomotives) "cause, or significantly contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare" and to regulate the sources that in his judgment "cause, or contribute to, such air

pollution." CAA §213 also directs the Administrator to adopt emission standards for new locomotives that:

> "achieve the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the locomotives or engines to which such standards apply, giving appropriate consideration to the cost of applying such technology within the period of time available to manufacturers and to noise, energy and safety factors associated with the application of such technology." (CAA §213(a)(5).)

Federal law preempts individual states from adopting emission standards for most of these sources (see CAA §§209 and 233). As explained in the next section, however, California has concurrent authority to regulate some nonroad engines or vehicles including marine vessels, and California can obtain a waiver of federal preemption to adopt emission standards for other national source categories.

If California is to adequately protect public health, the essential emission reductions necessary from these sources must be fully realized through timely promulgation of all feasible standards for national sources by U.S. EPA under the authorities provided in the Act. Without such federal control of preempted and national transportation sources, California simply cannot adequately protect public health because it is not possible to obtain sufficient emission reductions solely from sources under local and jurisdiction to offset uncontrolled or undercontrolled emissions contributed by national sources subject to federal control.

The very broad language of the Clean Air Act authorizes and directs the Administrator to establish appropriate standards for national sources in order to effectively address emissions from these sources in California and other states. Such standards are necessary and technologically feasible; therefore, U.S. EPA has an obligation to promulgate these standards without delay.

General State Authority for Mobile Source Measures

ARB has broad authority under State law to regulate mobile sources. Health and Safety Code §§ 43000, 43000.5, 43013(b) and 43018 provide authority for ARB to adopt emission standards and other regulations to reduce emissions from new and in-use motor vehicles and other mobile sources. These authorities empower the Board to adopt the mobile source regulations and other control measures identified in this SIP. Health and Safety Code §43013(a) provides that:

> "The state board may adopt and implement motor vehicle emission standards, in-use performance standards, and motor vehicle fuel specifications for the control of air [pollutants] and sources of air pollution which the state board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of this division, unless preempted by federal law."

In addition, Health and Safety Code §43018 provides:

> "The state board shall endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards at the earliest practical date."

To carry out these directives, the Board is directed to:

> "... adopt and implement emission standards for new motor vehicles [or new motor vehicle engines] for the control of emissions therefrom, which standards the state board has found to be necessary and technologically feasible to carry out the purposes of this division. Prior to adopting such standards, the state board shall consider the impact of such standards on the economy of the state, including, but not limited to, their effect on motor vehicle fuel efficiency." (§43101)

The Board is also directed by §43013(b) to regulate other categories of mobile sources:

> "The state board shall … adopt standards and regulations for … off-road or nonvehicle engine categories, including, but not limited to, off-highway motorcycles, off-highway vehicles, construction equipment, farm equipment, utility engines, locomotives, and, to the extent permitted by federal law, marine vessels."

ARB is further authorized by State law to adopt Air Toxic Control Measures (ATCMs) to control identified toxic air contaminants (TACs). ARB has identified a number of substances as TACs, including "particulate emissions from diesel-fueled engines" (see title 17, California Code of Regulations, sections 93000 and 93001). The authority to identify TACs and adopt ATCMs is provided by the Tanner Act (Health and Safety Code §39650 et seq.). Under the Tanner Act, ARB may adopt ATCMs to control TAC emissions from both nonvehicular sources (such as off-road diesel engines and equipment, marine vessels, etc.) and from vehicular sources such as on-road diesel trucks (see §§36658, 39666, and 39667). ATCMs may specify both new and in-use emission standards for all of these sources.

Each of the sections cited above must be read in the context of Health and Safety Code 39600, which provides that: "The state board shall do such acts as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law."

Pursuant to these authorities ARB has adopted the world's most stringent standards for passenger cars, light-duty trucks and medium-duty vehicles. ARB has also adopted regulations establishing standards for heavy-duty vehicles, off-road vehicles and engines, including small off-road engines and equipment (e.g., lawn and garden, small utility engines), off-road recreational vehicles (e.g., dirt

bikes, all-terrain vehicles, golf carts), off-road diesel engines and equipment (e.g., certain farm and construction equipment, portable generators), off-road gasoline and LPG engines and equipment (e.g., forklifts, airport ground support equipment), and marine pleasure craft (e.g., jet skies and recreational boats).

Federal Preemption and Waivers

The CAA preempts states, including California, from adopting requirements for new off-road engines smaller than 175 horsepower used in farm or construction equipment. (CAA §209(e)). However, the CAA does not preempt California from adopting requirements for new off-road engines greater than 175 horsepower used in farm or construction equipment. California may also adopt in-use emission standards for off-road engines. However, California must obtain authorization from the Administrator of the U.S. EPA (i.e., a waiver) under CAA §209(e) before any new or in-use standards for off-road vehicles can be enforced, unless such standards are within the scope of a previously granted authorization.

In-use standards for on-road vehicles and engines (such as diesel trucks) are not covered by CAA §209. California is not preempted from adopting in-use, on-road standards and does not need to obtain a waiver for such standards.

State Authority to Regulate Marine Vessels

State law authorizes ARB to regulate marine vessels to the extent such regulation is not preempted by federal law. This authority is provided by Health and Safety Code §§43013 and 43018 and by the Tanner Act, which authorizes the adoption of ATCMs to regulate diesel particulate emissions from marine vessels.

The CAA places certain constraints on ARB's legal authority to regulate emissions from marine vessels in California Coastal Waters. The key issue is whether ARB measures are engine emission standards or in-use operational requirements. The CAA preempts California from implementing engine emission standards (e.g., new or retrofit engine standards or requirements) unless California has received authorization from the U.S. EPA to enforce such standards under CAA §209(e)(2). However, the CAA does not preempt states from implementing in-use operational standards, which include but are not limited to restrictions on hours of operation, sulfur limits on fuel, and daily mass emission limits (see Appendix A to 40 CFR Part 89, Subpart A, as discussed at 62 FR 67733, 67735 (December 30, 1997)).

The 2007 SIP includes measures to require the use of cleaner, low-sulfur fuel in ship auxiliary and main engines. These requirements are best characterized as in-use operation requirements that are not preempted under the CAA. However, to the extent that these fuel requirements could be characterized as engine emission standards, California would need to get U.S. EPA authorization under CAA section 209(e). Authorization from U.S. EPA under CAA section 209(e) will

also be needed for the proposed SIP measures on harborcraft that would impose new engine and in-use retrofit/repower standards.

The 2007 SIP also includes a cold-ironing measure for ships. This measure will likely not require U.S. EPA authorization since the measure can be drafted as an in-use operational requirement. Similarly, the vessel speed reduction measure in the SIP would clearly be an in-use operational requirement that does not require U.S. EPA authorization. However, to the extent these two measures mandate the installation and use of specific equipment on board vessels, those mandates would likely require U.S. EPA authorization under CAA §209(e).

Case law supports California authority to regulate marine vessel emissions while the ships are at the ports and in California Coastal Waters, provided a reasonable "nexus" is established between the regulation and the state's legitimate interest in protecting the health and safety of its citizens or its natural resources (see Gillis v. State of Louisiana, 294 F.3d 755, 761 (5th Cir. 2002)). Properly drafted to avoid impacting the internal affairs of a vessel, California regulations on marine vessels could also be extended to foreign-flagged vessels as well as U.S.-flagged ones (see Spector v. Norwegian Cruise Line, Ltd., 545 U.S. 119, 130-131).

Smog Check Program

California's vehicle inspection and maintenance program (commonly referred to as the "smog check program") is administered by the Bureau of Automotive Repair, which has the authority under state law for developing and implementing the program (§ 44002). The overall structure of California's current smog check program was established by legislation enacted in 1994 in response to the requirements of the federal Clean Air Act and U.S. EPA regulations. The laws governing the implementation and enforcement of the program are set forth in Health and Safety Code §44000 et seq.

Fuels

ARB has the authority to regulate the content of motor vehicle fuels. This was recognized by the California Supreme Court in a 1975 decision, *Western Oil & Gas Assn. v. Orange County Air Pollution Control District* (1975), 14 Cal. 3d 411, 418-420, which held that the authority of ARB to adopt and implement motor vehicle emission standards includes the authority to set standards for motor vehicle fuels.

ARB's authority over fuels was reaffirmed and clarified in the California Clean Air Act of 1988, which added §43018 to the Health and Safety Code and substantially amended §43013. These sections provide that ARB has the authority to establish motor vehicle fuel regulations, and that before adopting and amending such regulations ARB must take certain specified actions and make specified determinations.

Consumer Products

ARB has broad authority under California law to regulate consumer products. Specifically, Health and Safety Code §41712(b) provides that:

> "The state board shall adopt regulations to achieve the maximum feasible reduction in volatile organic compounds [VOC] emitted by consumer products, if the state board determines that adequate data exists to establish both of the following:
>
> (1) The regulations are necessary to attain state and federal ambient air quality standards.
>
> (2) The regulations are commercially and technologically feasible and necessary."
>
> (See also §39600.)

Pursuant to this authority ARB has already adopted standards for numerous categories of consumer products and has achieved significant emission reductions from these products. ARB will continue to develop and adopt measures that limit the VOC emissions from consumer products.

Vapor Recovery

Health and Safety Code §41954 requires ARB to adopt procedures and performance standards for controlling gasoline vapor emissions from gasoline marketing operations, including transfer and storage operations, to achieve and maintain ambient air quality standards. This section also authorizes ARB, in cooperation with districts, to certify vapor recovery systems that meet the performance standards. Health and Safety Code §39607(d) requires ARB to adopt test procedures to determine compliance with ARB and districts' non-vehicular standards. State law (§41954) further requires districts to use ARB test procedures for determining compliance with performance standards and specifications established by ARB.

To comply with these provisions of state law, ARB has adopted the gasoline vapor recovery certification and test procedures found in 17 California Code of Regulations §§94010 to 94015 and 94101 to 94165. These regulations reference procedures for certifying vapor recovery systems and test procedures for verifying compliance with performance standards and specifications.

Pesticides

DPR has broad authority under state law to control the use of pesticides for the purposes of protecting human health and the environment, including improving air quality. This authority is set forth in Divisions 6 and 7 of the California Food and Agricultural Code (FAC); (FAC §§14082, 14102, also §§12781, 12824-12828, 12976-12977, 12991-12995, 12996-12999, 13101 and 13102). Following are more specific descriptions of DPR's authority in particular areas.

DPR has the power to adopt regulations to carry out the provisions of the FAC that it is authorized to administer or enforce (FAC §§11456, 11502.5, 12781, 12976, 12981). No pesticide may be manufactured, sold or offered for sale in California unless it has been registered by the DPR (§12811). DPR may place appropriate restrictions on a pesticide's use, including limitations on the quantity, area, and manner of application (§12824).

Use of pesticides classified as "restricted materials" often requires a permit (see §§14006.5; title 3, California Code of Regulations (CCR), §6412). All agricultural and commercial structural use fumigants are restricted materials. Permits to use restricted materials are issued by the appropriate County Agricultural Commissioner, or by DPR in counties that have no County Agricultural Commissioner. DPR can and does recommend permit conditions to be included in restricted material permits. DPR can also enact use restrictions or permit conditions by regulation (FAC §14007(a)). DPR must adopt regulations governing the use of any restricted material that the Director determines is injurious to the environment (FAC §14005). It is unlawful to apply any restricted material for which regulations have been adopted except as provided in such regulations (FAC §4011).

All agricultural and commercial structural use of pesticides must be reported (title 3, CCR §6624 and FAC §12979). Among other information, the Pesticide Use Reports must identify the date of application; location of property treated; total acres or units treated; and the pesticide and amount used (title 3, CCR §6624).

New Technology Measures for ARB's Long-Term Strategy

Like the 1994 and 1999 SIPs for the South Coast Air Basin, this SIP contains a special class of new technology measures necessary to contribute to attainment in the South Coast and San Joaquin Valley. CAA §182 sets out requirements for marginal, moderate, serious, severe and extreme ozone nonattainment areas, with the requirements for each level building on the preceding requirements. The South Coast and San Joaquin Valley have or intend to request to "bump-up" to an extreme classification in order to show attainment of the federal 8-hour ozone standard by 2024. As extreme areas, the South Coast and San Joaquin Valley will be required to meet the most strenuous requirements applicable to areas with lesser ozone problems, plus all of the requirements of CAA §182(e)(1) through (3). The following discussion applies to any California nonattainment area classified as extreme.

To address attainment planning for extreme ozone nonattainment areas, Congress enacted CAA §182(e)(5) as part of the 1990 CAA amendments. Specifically, CAA §182(e)(5) provides:

> "The Administrator may, in accordance with section 110, approve provisions of an implementation plan for an Extreme Area which anticipate development of new control techniques or improvement of existing control technologies, and an attainment demonstration based

on such provisions, if the State demonstrates to the satisfaction of the Administrator that--

(A) such provisions are not necessary to achieve the incremental emission reductions required during the first 10 years after the date of the enactment of the Clean Air Act Amendments of 1990; and

(B) the State has submitted enforceable commitments to develop and adopt contingency measures to be implemented as set forth herein if the anticipated technologies do not achieve planned reductions.

Such contingency measures shall be submitted to the Administrator no later than 3 years before proposed implementation of the plan provisions and approved or disapproved by the Administrator in accordance with section 110. The contingency measures shall be adequate to produce emission reductions sufficient, in conjunction with other approved plan provisions, to achieve the periodic emission reductions required by subsection (b)(1) and (c)(2) and attainment by the applicable dates. If the Administrator determines that an Extreme Area has failed to achieve an emission reduction requirement set forth in subsection (b)(1) or (c)(2), and that failure is due in whole or part to an inability to fully implement provisions approved pursuant to this subsection, the Administrator shall require the State to implement the contingency measures to the extent necessary to assure compliance with subsections (b)(1) and (c)(2)."

U.S. EPA approved the new technology measures set forth in the 1994 and 1999 Ozone SIPS (60 FR 43379, 4381 (August 21, 1995); 65 FR 6091, 6093 (February 8, 2000), and further explained its interpretation of §182(e)(5):

> "The 1990 Amendments to the Act added section 182(e)(5), which applies exclusively to "Extreme" ozone areas. This provision authorizes the State to use conceptual, as yet unadopted measures for its ozone attainment demonstration and rate-of-progress after the year 2000, if these measures anticipate new or improved technology or control techniques and are not needed to meet the progress requirements of the first 10 years . . . These measures necessarily are preliminary, and as such lack both regulations and technical support or even decisions regarding specific directions and approaches. Complete SIP rule elements are dependent upon future years of research projects, analyses of technologies and associated commercial feasibility, public workshops, and public decisionmaking." (60 FR 43381)

The 2007 SIP for the South Coast and San Joaquin Valley will rely on §182(e)(5) measures for a significant quantity of emission reductions. This reliance was intended by the Act, and long-term measures that rely on new or evolving technology (including measures requiring complex analyses and decision-making and coordination among numerous government agencies) fall within the coverage of §182(e)(5) and are approvable as SIP revisions although not yet fully developed or adopted.

Use of Secured Incentive Funding

The emission reductions from adopted SIP measures include reductions achieved through incentive programs (such as the Carl Moyer program) that help finance the clean-up of the in-use or legacy fleet of heavy-duty diesel trucks, buses, and other diesel equipment. California is currently investing up to $140 million per year through the Carl Moyer Program. In the adopted measure emission reduction calculations, ARB included the benefit of emission reductions that will occur in future years from funds that have been directed to ARB and through legislation.

ARB is able to include the benefit of these incentive programs because the funds have been secured for ARB through state legislation. The Carl Moyer Memorial Air Quality Standards program was established in 1988 and in its first six years, the program provided over $140 million in funding to clean up more than 6,300 heavy-duty engines. State legislation (AB 923, 2004 and SB 1107, 2004) provided increased and continued funding for the program and other incentive programs – up to $141 million annually through 2015. The sources of this new funding secured in this legislation are listed below.

1. Increased and expanded Smog Check program fee revenues directed to the program provide approximately $61 million per year. It is emission reductions from these revenues that have been included in the adopted measures in this SIP.

2. An increase in the fee assessed for new tire purchases from $1 to $1.75 provides approximately $25 million per year through 2015. The resulting revenues are directed to the air districts.

3. A $2 increase in the amount of air district-imposed motor vehicle registration fees will provide up to $55 million per year to local air districts for clean air incentive programs.

Reasonably Available Control Measures (RACM) Discussion

U.S. EPA's guidance requires each nonattainment area to submit a demonstration that it has adopted all RACM necessary to demonstrate attainment as expeditiously as possible. However, U.S. EPA has already determined that the California (i.e., ARB) control programs for mobile sources and fuels constitute BACM.[2] Moreover, whereas U.S. EPA deems its federal mobile source program to establish best available control measures for the nation, the California program generally goes beyond federal mobile source requirements (where not otherwise prescribed by federal law). Therefore, ARB believes that the State mobile source program exceeds federal RACM requirements.

[2]See page 5419 of the February 4, 2004 proposed rulemaking for the San Joaquin Valley PM10 plan, and page 30035 of the May 26, 2004 final rule.

Analyses of measures and adoption commitments for sources under air district responsibility subject to RACM and Reasonable Available Control Technology (RACT) requirements are included in the local air district plans.

Conformity Budgets

Section 176(c) of the CAA requires that any action by the Federal government be consistent with, or "conform" to the purpose and intent of the SIP. This section of the Clean Air Act also requires that transportation planning agencies in areas that do not meet federal air quality standards demonstrate that their long range plans, funding programs and projects are consistent with and conform to the SIP before any part of the federal government grants approval, funding, or takes any other action on those plans, programs or projects.

In turn, the local air quality attainment plans are required by the Clean Air Act to set out emissions budgets for transportation agencies to use when demonstrating conformity to the SIP. These emission budgets are linked to the attainment demonstration, and represent an upper bound, or ceiling that cannot be exceeded without undermining the SIP in its efforts to attain the federal air quality standards. Because the development of an area's emission budget takes place at the local level, each local plan will contain that area's transportation conformity emissions budgets and supporting material concerning the basis and development of those budgets.