

Progress Report on Implementation of
PM2.5 State Implementation Plans (SIP)
for the
South Coast and San Joaquin Valley Air Basins

and

Proposed SIP Revisions

Release Date: March 29, 2011
Hearing Date: April 28, 2011

California Environmental Protection Agency



Air Resources Board

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California Is Meeting Its Clean Air Commitments for 2014

For several years, California has been implementing PM2.5 (fine particulate matter) State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins. As required by the federal Clean Air Act (Act), these SIPs show how California plans to attain the annual PM2.5 standard by the 2014 deadline, with specific emission targets for each region. With a few years remaining until the attainment deadline, California is meeting the commitments identified in the PM2.5 SIPs, and air quality continues to improve.

Figures 1 and 2 illustrate California's progress with rulemaking completed to date and the last three years of SIP implementation remaining. The San Joaquin Valley meets, and the South Coast is 94 percent of the way towards achieving the 2014 emissions levels identified in their respective PM2.5 SIPs.

In 2010, the Air Resources Board (ARB) revisited key regulations to account for the lower emission levels resulting from the economic downturn and provided some economic relief to affected industries while maintaining the 2014 emissions target. This is reflected in Figures 1 and 2.

Figure 1

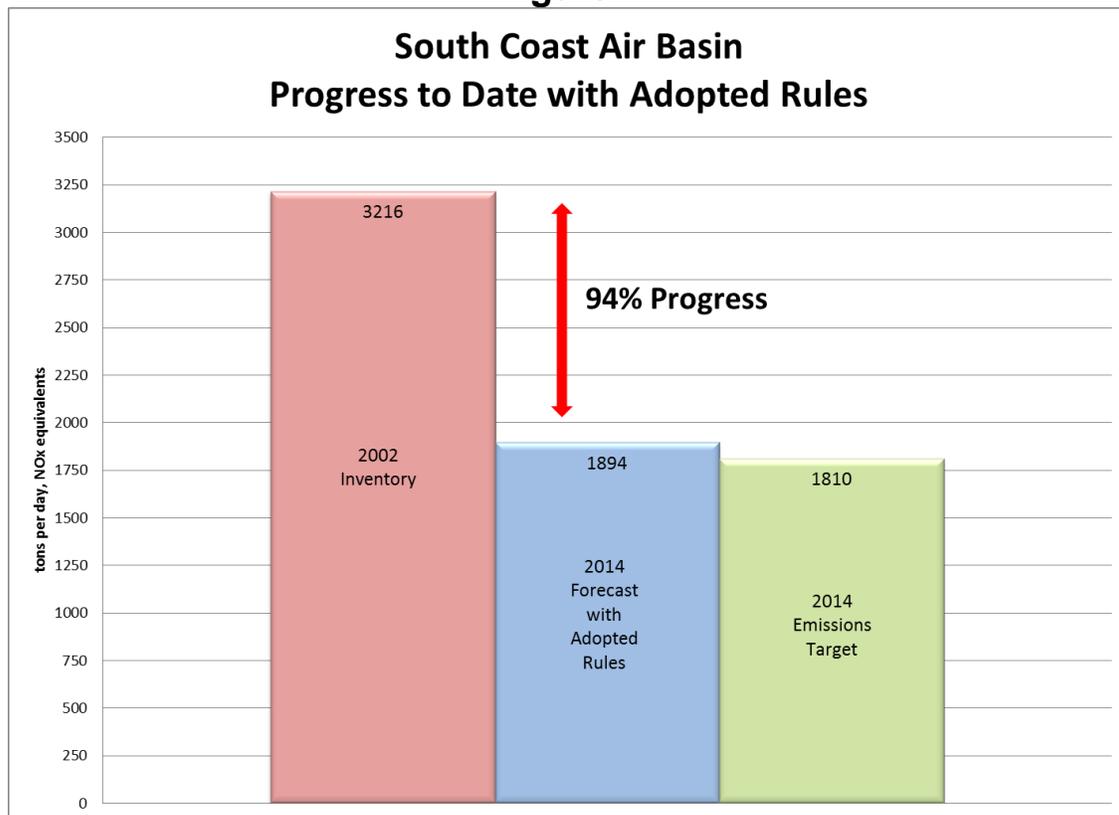
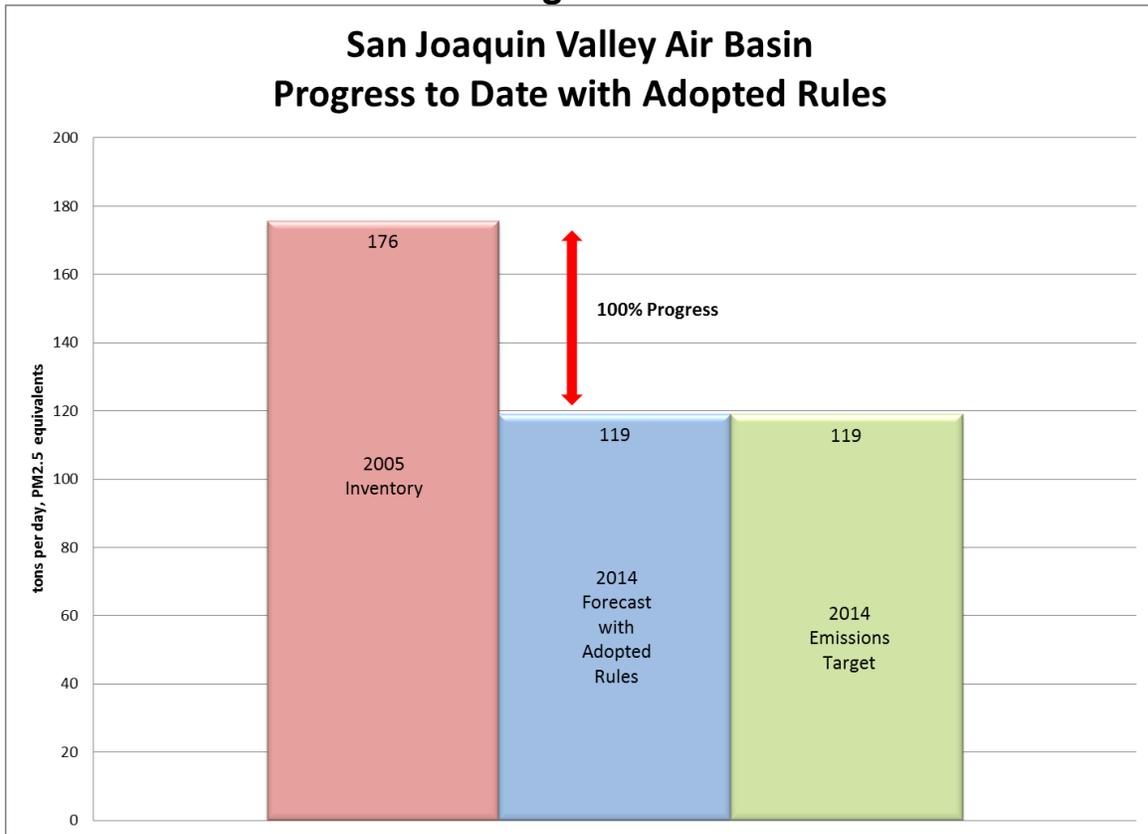


Figure 2



The Clean Air Act Set a Process to Develop and Implement SIPs

California's primary responsibility under the Clean Air Act is clear – to develop and implement air quality plans to attain the National Ambient Air Quality Standards (NAAQS) by the required deadlines. The Act mandates a specific process for developing and implementing the SIPs necessary for demonstrating how the NAAQS will be attained. The Act specifies processes for federal sanctions if states fail to develop or to implement required SIPs and requires states to prepare additional SIP revisions if a standard is not met by the deadline.

In California, ARB and the local air districts develop and adopt SIPs based on the best scientific data available at the time. The SIP development process takes 2-3 years, and involves emissions and air quality data gathering and analysis, air quality modeling and documentation, control strategy development, transportation conformity budget development, reasonable further progress analyses, and a comprehensive public process before the plan is ready for consideration and approval by local districts and ARB. Adding to the complexity, the State and local portions must be woven together to reflect the respective regulatory responsibilities.

Key to this process, and a defining component of the State's SIP commitment, is the air quality modeling results that identify the level of emissions needed in the attainment year to achieve the federal standard. Air quality modeling is an analytical tool that is used to test a scenario of future emissions, and the associated impact on air quality, in order to identify a target level of emissions expected to result in attainment. The SIP is then designed to meet this emissions target. The modeling also provides data which informs the selection of the most effective control strategy.

After adoption, ARB submits the SIP to U.S. EPA for review and approval. The work of implementation then begins, focused on achieving the SIP target level of emissions by the required deadline. Once the plan is adopted, emissions accounting is the appropriate tool to track progress, address any shortfalls, and ensure the State is meeting the legal commitments contained in the plan.

In the case where a region fails to attain a federal standard by the attainment deadline, Section 110 of the Act sets out a separate, sequential process that would require U.S. EPA to direct the state to develop a new SIP with a new attainment deadline.

The Act's step-wise approach of attainment planning, SIP implementation, and monitoring attainment status avoids forcing states into a perpetual planning process. Instead, the Act directs most of the effort towards achieving attainment through rule adoption and SIP implementation. New plans come into play only when an air quality standard is not met by the applicable deadline.

U.S. EPA Can Now Approve the PM_{2.5} SIPs for the South Coast and the San Joaquin Valley

California is following the SIP development and implementation process mandated by the Act, despite the delay in federal action on the PM_{2.5} SIPs for the South Coast and San Joaquin Valley. Implementation and tracking of SIP commitments began immediately upon State approval of the PM_{2.5} SIPs. This progress report documents both the regulatory and air quality progress that has been made in the South Coast and San Joaquin Valley since the PM_{2.5} plans were adopted in 2007 and 2008 respectively.

This report also provides targeted revisions to the South Coast and San Joaquin Valley PM_{2.5} SIPs due to recent revisions to ARB's rules affecting in-use trucks and buses and off-road construction equipment. These SIP revisions are limited to an updated calendar of ARB rulemaking, updates to the Reasonable Further Progress tables and associated reductions for contingency purposes, and adjustments to the transportation conformity budgets.

In a separate action on March 4, 2011, the South Coast adopted revisions to their PM_{2.5} and Ozone SIP for the South Coast Air Basin and Coachella Valley. These revisions are contained in Appendix F. They update the implementation status of the

district's control measures to meet the PM2.5 attainment date, revise the control measure adoption schedule, and modify the District's emissions reduction commitment to reflect improvements to the off-road emissions estimates for 2014.

Together, these submittals should provide what U.S. EPA needs to fully approve the PM2.5 plans for the South Coast and San Joaquin Valley.

ARB's Clean Air Commitment is Enforceable

While California's emissions levels have in some cases declined substantially since 2007 as a result of the economic recession, ARB continues to fully implement the PM2.5 SIPs.

When ARB adopted the 2007 State Strategy as a SIP revision, the State of California made a legal commitment, required by the Clean Air Act and enforceable in federal court, to reduce emissions to the levels necessary for attainment. ARB specifically identified several ways this emission reduction commitment could be achieved:

- New measures as described in the SIP
- Other alternative measures that ARB had not considered at the time the SIP was adopted
- Incentive programs that support the replacement or retrofit of aging, higher polluting pieces of equipment
- Actual emission decreases

As a result of the recession, actual emission decreases moved California closer to the emissions levels needed for attainment in 2014. The recession has reduced economic activity and emissions, most notably in the goods movement sector. This has allowed ARB to maintain the State's SIP commitments in the South Coast and San Joaquin Valley while also providing some near-term economic relief to affected industries.

As the economy recovers, ARB will continue to track emission trends to ensure the 2014 emission targets are met. If future emissions were to exceed the SIP target, the State's commitment could be made up with additional controls, incentive programs, or other programs to bring emissions down to the necessary levels. A discussion of how ARB accounted for the recession is found later in this report.

State law¹ assigns ARB the primary responsibility to ensure California's compliance with the federal Clean Air Act. Traditionally, ARB shares that responsibility with local air districts through defined SIP commitments at both the State and local level. In the case of the PM2.5 SIP, there is also an expectation on the part of the State that the federal government provide additional emission reductions based on the U.S. EPA's authority to regulate locomotives and other national sources of air pollution.

¹ California Health and Safety Code section 39003.

However, if there is a shortfall in a SIP due to lack of federal action, California will be required to achieve additional emission reductions. For example, the SIP for the South Coast calls for reductions of 10 tons per day of oxides of nitrogen (NO_x) from sources U.S. EPA or other federal agencies regulate. If the federal government does not provide the expected emission reductions, ARB still has the obligation that the emissions targets specified in the SIP are met by the required deadline.

The Technical Foundation for the PM_{2.5} SIPs is Sound

ARB exercised its responsibility at the time of SIP development, public review, and Board adoption, to ensure that the PM_{2.5} attainment demonstrations met all applicable Clean Air Act requirements, used the best information available at the time, and identified a path to attainment that is technically achievable. ARB's SIP commitment to reduce emissions to the levels necessary for PM_{2.5} attainment relies on the strong scientific foundation provided in the SIPs for both the South Coast Air Basin and the San Joaquin Valley.

In a recent court decision², the Court called upon U.S. EPA to exercise its affirmative duty to ensure the State's plan is adequate for attainment of the applicable federal standard. Given the strong science supporting California's PM_{2.5} SIPs, U.S. EPA's assessment of SIP adequacy should focus on the State's demonstrated progress in implementing the adopted plan and achieving real world reductions in air pollution. Adopted SIPs should not be set aside unless there is compelling scientific evidence that the adopted attainment demonstration is substantially flawed, taking into account the unavoidable uncertainties in emission estimates, air quality modeling, and other technical elements.

In the case of the PM_{2.5} SIPs for the South Coast Air Basin and San Joaquin Valley, there has been no significant change to the fundamental science and air quality modeling used to set the 2014 emissions targets. The SIP modeling remains in accordance with U.S. EPA requirements and should be approved by U.S. EPA. Similarly, the overall control strategy is unchanged and in the process of being implemented. Initiating new air quality modeling to reassess the existing attainment demonstration would serve no practical purpose. The biggest change since the PM_{2.5} SIPs were adopted is the unanticipated slowdown in economic growth and what it means for PM_{2.5} precursor emissions in 2014. An emissions accounting that incorporates the impacts of the recession, future emission changes, and the benefits of new SIP measures is the appropriate approach to assess the adequacy of the PM_{2.5} SIPs now close to final implementation.

² U. S. Court of Appeals for the Ninth Circuit in Association of Irrigated Residents, et al. v. U.S. EPA, filed February 2, 2011.

Development and adoption of the PM2.5 SIPs in the South Coast and San Joaquin Valley followed the mandated process, and resulted in a resource-intensive, 3-year technical effort with a public process that stretched over a year. The end result is a plan whose technical underpinnings remain sound even as new information has become available during SIP implementation. While new emission forecasts are included in the accounting for progress towards the 2014 emissions target, the target itself should not change.

Air quality modeling is an analytical tool that is used to test a scenario of future emissions, and the associated impact on air quality, in order to identify a target level of emissions expected to result in attainment of an air quality standard. The air quality modeling contained in the PM2.5 SIPs is built on the results of the multimillion dollar air quality studies conducted in central California, including the \$50 million California Regional Particulate Air Quality Study (CRPAQS) and the Central California Ozone Study (CCOS).

The ability of an air quality model to predict the attainment year emission targets relies on adequate model performance in the base year. Small changes in base year emissions would not substantially change the fundamental relationship between emissions and measured air quality in the base year modeling. The recession does not impact the SIP base year modeling since both regions used base years prior to the recession. The new emissions inventory data primarily impact current emissions and estimates of future emissions as the economy recovers and do not substantially change the total regional emissions in the base years. Therefore, the air quality modeling and the 2014 emissions targets should be approved by U.S. EPA.

California's development and implementation of the PM2.5 SIPs in the South Coast and San Joaquin Valley illustrates the process mandated by the Act to reach attainment in 2014. In developing and then adopting the 2007 and 2008 PM2.5 SIPs for the South Coast and San Joaquin Valley, the ARB and local air districts provided a technically complete attainment plan. Once the plans were adopted, California's focus appropriately turned to SIP implementation. For its part, U.S. EPA's sulfur in marine fuels rule has also advanced PM2.5 reductions in the South Coast. The SIP technical foundation meets U.S. EPA requirements, control measures are being implemented, and progress is being made. As a result, a modeling update at this juncture is neither necessary nor appropriate.

ARB Is Implementing Its Rulemaking Calendar

A key component of SIP implementation is the rulemaking calendar. ARB adopted a SIP revision (the 2007 State Strategy) that mapped out the actions it would take to reduce PM_{2.5} direct and precursor emissions to levels designed to bring California nonattainment areas into compliance with federal health-based air quality standards. ARB had initiated rule development for several measures even before the Board adopted the State Strategy in late 2007. This work continues, with several State and local district measures scheduled for adoption between now and 2014. The respective air district plans provide information about the local efforts to adopt and implement local control measures. Table 1 provides an update on the status of SIP measures in the 2007 State Strategy.

The 2007 State Strategy identifies a comprehensive set of State control strategies that support attainment through a combination of technologically feasible, cost-effective, and far reaching measures. ARB actions to date, together with rules adopted by the South Coast and San Joaquin Valley air districts, will bring the two regions within 94 percent and 100 percent of the emission levels needed to reach attainment in 2014 in the South Coast and San Joaquin Valley, respectively. Some of the most important adopted State regulations include:

- Cleanup of the existing truck fleet statewide
- Repowering or replacing older, dirtier off-road construction vehicles, and installing exhaust retrofits
- Lower sulfur limits on fuels used by ships in California waters
- Control of emissions from goods movement sources
- Smog Check improvements

Table 1
Proposed Update to 2007 State Strategy: PM2.5 SIP Measures

	Agency	Actions	Implementation
Passenger Vehicles			
Smog Check Improvements	BAR	2007-2009	2008-2010; 2013 ¹
Expanded Vehicle Retirement (AB 118)	ARB/BAR	2007	2009
Modifications to Reformulated Gasoline Program	ARB	2007	2010
Trucks			
Cleaner In-Use Heavy-Duty Trucks	ARB	2007, 2008, 2010	2011-2015
Goods Movement Sources			
Auxiliary Ship Engine Cold Ironing & Other Clean Tech	EPA/ARB/ Local	2007, 2008	2010
Cleaner Main Ship Engines and Fuel ²		Fuel: 2008- 2011	2009-2015
		Engines: 2008	2011
Port Truck Modernization	ARB, Local	2007,2008, 2010	2008-2020
Accelerated Intro. of Cleaner Line-Haul Locomotives ³	EPA/ARB	2008	2012
Clean Up Existing Harbor Craft	ARB	2007, 2010	2009-2018
Off-Road Equipment			
Cleaner In-Use Off-Road Equipment ⁴	ARB	2007, 2010	2009
Other Off-Road Sources			
New Emission Standards for Recreational Boats ⁵	ARB	See notes	See notes
Expanded Off-Road Recreational Vehicle Emission Standards ⁵	ARB	See notes	See notes
Enhanced Vapor Recovery for Above-Ground Storage Tanks	ARB	2008	2009-2016
Additional Evaporative Emission Standards ⁵		2009	2010-2012
		See notes	See notes
Areawide Sources			
Consumer Products Program	ARB	2008	2010
		2009	2013-2014
		2011	2014
Pesticide Regulation	DPR	2008, 2009	2009

¹In 2010, the State Legislature improved the effectiveness of the Smog Check program (AB 2289), requiring the Bureau of Automotive Repair to direct older vehicles to high performing auto technicians and test stations for inspection and certification. This new program will be effective in 2013.

²In July 2008, ARB adopted a regulation that applies to ships operating within 24 nautical miles (nm) of the California Coastline and visiting California ports. These vessels must use less polluting marine distillate fuel for their main engines, auxiliary engines, and boilers instead of heavy fuel oil. The first phase of cleaner fuel for ship main engines took effect in 2009, with a second phase currently scheduled in 2012. By 2015, the International Maritime Organization's fuel sulfur requirements for the North American Emission Control Area will match ARB's phase 2 standards and extend out to 200 miles from California Coastline.

³In 2008, ARB awarded Prop 1B bond funds to upgrade line-haul locomotive engines not already accounted for by enforceable agreements with the railroads. Those cleaner line-hauls will begin operation by 2012.

⁴Reductions begin in 2014.

⁵Expected action in 2013, with implementation schedules to be determined in rulemaking process.

Tables 2 and 3 show the progress towards meeting the State's enforceable SIP commitment in each region. The tables include the benefits of local and State controls for each PM2.5 precursor pollutant. To maintain consistency with how each air district displays progress in their documents, the South Coast table is displayed in equivalents of nitrogen oxides (NOx), while the San Joaquin Valley table is in PM2.5 equivalents. NOx and PM2.5 equivalent emissions are calculated using weighting factors from the SIP technical analyses to arithmetically combine the precursor pollutants that form PM2.5. The factors are necessary since the relative effectiveness of each pollutant in reducing atmospheric PM2.5 varies by pollutant and region. From a technical perspective, it does not matter which pollutant is used as the equivalence benchmark to illustrate progress since the same scientific data is applied regardless of how equivalency is expressed.

Table 2
South Coast Air Basin
Progress to Date with Adopted Rules
annual average tons per day

	SOx	PM2.5	ROG	NOx	NOx eq.
2002 Inventory	53	99	844	1093	3216
2014 Emissions Target	20	86	474	460	1810
2014 Forecast with Adopted Rules	20	87	485	530	1894
% progress	100%	92%	97%	89%	94%

Table 3
San Joaquin Valley Air Basin
Progress to Date with Adopted Rules
annual average tons per day

	SOx	PM2.5	NOx	PM2.5 eq.
2005 Inventory	26	86	575	176
2014 SIP Emissions Target	24	63	291	119
2014 Forecast with Adopted Rules	21	65	298	119
% progress	201%	90%	98%	100%

ARB Accounts for the Impact of the Recession on Goods Movement

The recession has imposed significant downward pressure on economic activity in the State. In order to meet their bottom line and maximize production output, many businesses have cut back debt, reduced employment, extended workforce hours, and sold assets, including part of their motor vehicle fleets. In some sectors, these adjustments resulting from the recession are expected to continue for some time, extending beyond the 2014 attainment date.

Two of the sectors hit the hardest by the recession are the construction industry and goods movement, including the trucking and shipping industries. These impacts, as well as recovery scenarios, were reflected in ARB's 2010 amendments to the statewide truck and construction regulations and are reflected in the goods movement categories included in this report. The one exception is the locomotive emissions estimate. ARB staff is still in the process of incorporating the latest information on locomotive activity into programs for reducing regional emissions and localized impacts.

In the 2010 assessment of the impacts of the recession, ARB staff evaluated a variety of sources of information including economic forecasts, fuel tax reports, highway performance monitoring data, equipment financial filing records, and vehicle sales information. The data indicated the recession impacted mobile sources in three ways. First, the recession reduced vehicle activity. Overall, trucking activity in California, measured by fuel usage, decreased by nearly 20 percent between 2007 and 2010. Construction-related activity declined by 50 percent between 2005 and 2010. These declines were dramatic, and in many cases unprecedented.

Second, the depth of the recession, being much more severe than economic recessions of the past 70 years, affected the forecast rate of future economic growth. Several economic forecasting groups including the University of California – Los Angeles, the University of the Pacific, and the California Department of Finance forecast that economic recovery and expansion, and rising employment levels will occur relatively slowly over the next five years. ARB used these estimates to reduce its forecasted vehicle activity levels from previously anticipated levels.

Third, the recession had a major impact on new vehicle sales, which in many cases fell by 80-90 percent from the peak levels seen in 2005-2007. Sales volumes are projected to increase gradually, and are not forecast to reach previous levels for several years. This has also reduced the penetration of the newest, cleanest vehicles into the California market, leaving fleets older than they would have been without the recession.

This economic outlook was used in the 2010 review of the statewide on-road truck rules, and resulted in a 2010 emissions inventory that is about 35 percent lower than estimated when the original rules were adopted in 2008. Similarly, the updated off-road inventory calculated during development of the construction rule is about 80 percent lower than previously estimated, with half the change attributable to the recession and half attributable to new emissions data and analysis.

When ARB revised the statewide truck and off-road fleet rules in 2010, the new inventory projections were used to design the timetable and regulatory provisions in such a way that emission benefits are preserved as economic growth picks up and full rule implementation phases in. The revised rules provide credits for fleets that have downsized to account for the recession, while allowing for a delay of additional capital investments until 2016. The rules provide incentives for early vehicle retrofit and turnover to achieve emissions reductions necessary for 2014, while offering some

economic relief. The revised rules will still provide the emissions reductions necessary to meet air quality standards, but do so at a lower cost. Concurrently, ARB retained and expanded the benefits of the drayage truck rule to protect communities near ports and rail yards.

The improvements would not significantly change the inventories for trucks, construction equipment, and ocean going vessels in years prior to the recession. The changes are small in the context of the entire emissions inventory, consequently the total regional SIP base year inventories need not be changed. The new information indicates that the 2014 economic activity estimates made prior to the recession are too high. Looking forward, revised economic activity forecasts and improvements to future emission estimates from these source categories are reflected in the emissions accounting to assess progress toward the SIP commitments, in the updated RFP demonstration, and in new conformity budget calculations.

Air Quality Continues to Improve

As a result of SIP implementation efforts at the local and State level, air quality is improving in both the South Coast and San Joaquin Valley regions.

The South Coast has seen dramatic improvement in PM_{2.5} air quality, with a 37 percent decrease in the basin-wide annual average design value over the last eight years. This decrease has occurred despite the inclusion of a new high site monitor in Mira Loma (Riverside County) in 2006. Based on data in 2009, sites outside the Riverside area already meet or are close to meeting the annual standard. While final South Coast data for 2010 are not yet available, indications are that concentrations have continued to further decline and that only the site at Mira Loma now exceeds the annual standard.

The San Joaquin Valley has also experienced an improvement in PM_{2.5} air quality, although the progress is not as uniform across the region. The biggest decreases occurred in the northern and central part of the Valley where the design values for various monitors decreased 25 to 37 percent between 2001 and 2010. Today, sites in the northern and central Valley meet or are close to meeting the annual standard. The southern San Joaquin Valley, which includes the Bakersfield area, has also shown improvement, with annual design values decreasing 10 to 20 percent.

Air quality design values reflect a three-year average which is used for comparison to federal standards. However, evaluating multiple measures of air quality can provide a broader picture of overall air quality progress. For example, individual year annual PM_{2.5} values for 2009 and 2010 throughout the Valley show significant improvement. In 2010, only two of the twelve sites in the Valley (Corcoran and Bakersfield) recorded annual concentrations that exceed the federal air quality standard. Peak 24-hour PM_{2.5} concentrations have also declined significantly, dropping over 30 percent since 2001. The Air Quality Index (AQI) is another measure that is used to evaluate daily air quality

conditions. Between 2001 and 2010, the number of days considered unhealthy under the AQI has been cut in half.

California Is Moving Forward

California has made tremendous progress in cleaning the air over the past several decades, providing environmental leadership and meeting Clean Air Act requirements. As California's PM_{2.5} SIPs are being implemented to meet a 2014 deadline, additional SIPs will need to be developed for other air quality standards. ARB is working with local air districts to develop new SIPs in 2012 that are required to address the daily 24-hour PM_{2.5} federal air quality standard by 2017. U.S. EPA's anticipated promulgation of a more stringent ozone standard will trigger a new round of SIPs with attainment deadlines well beyond 2020. As these efforts proceed, ARB will use the most recent emissions inventory data from category-specific rules, refine existing inventory models, and conduct additional air quality modeling.

As required by the federal Clean Air Act, the South Coast and San Joaquin Valley PM_{2.5} SIPs show how California plans to attain the annual PM_{2.5} standard by the 2014 deadline, with specific emission targets for each region. With three years remaining until the attainment deadline, California is meeting the commitments identified in the PM_{2.5} SIPs, and air quality continues to improve. With California's progress on rulemaking the San Joaquin Valley meets, and the South Coast is 94 percent of the way towards achieving the emissions levels identified in their respective PM_{2.5} SIPs for attainment in 2014. The SIPs' technical foundation is sound, control measures are being implemented, and progress is being made. The targeted revisions to the South Coast and San Joaquin Valley PM_{2.5} SIPs should provide what U.S. EPA needs to fully approve the PM_{2.5} plans for the South Coast and San Joaquin Valley.

APPENDICIES

APPENDIX A: Descriptions of the Proposed SIP Revisions

Updates to ARB's Rulemaking Calendar

ARB staff is proposing updates to ARB's Rulemaking Calendar to reflect the current status of adopted PM2.5 measures and changes to expected action dates for three of these measures: new emission standards for recreational boats, expanded off-road recreational vehicle emission standards, and additional evaporative emission standards. ARB proposes to modify the action date for all three measures from the existing range of 2009-2010 to 2013. ARB action on these measures in this timeframe will allow implementation to occur by the 2014 attainment date. ARB's commitments to achieve emission reductions by specified dates, as identified in the 2007 State Strategy, remain unchanged and are not altered by the proposed changes to ARB's rulemaking calendar. Appendix B provides the PM2.5 SIP revision for the updated rulemaking calendar.

Reasonable Further Progress

The federal Clean Air Act (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 (RFP). ARB staff is proposing updates to the RFP tables to reflect the current status of adopted measures and account for changes due to the recession. These revisions are necessary to reflect current forecasted emissions as a result of the impacts of the recession on key source categories in the SIPs. Appendix C provides the SIP revision for the updated RFP tables.

The Act also requires attainment plans to identify "contingency measures" to be implemented if nonattainment areas fail to meet RFP 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.

For PM2.5, U.S. EPA requires that the RFP plan show generally linear progress for the precursor pollutants identified in the attainment demonstration. For the San Joaquin Valley this includes direct PM2.5, NOx, and SOx. For the South Coast Air Basin it also includes ROG. Since both the San Joaquin Valley and South Coast Air Basin show attainment in 2014, 2009 and 2012 are the milestone years for RFP. ARB is providing contingency measures for the 2012 RFP milestone and 2014 attainment years as appropriate.

ARB is updating the RFP milestone emission levels to reflect the impact of the recession and recent changes to the in-use heavy-duty truck and off-road equipment

rules, and also the ocean-going vessels rule for the South Coast. Appendix C Tables 1 and 2 display projected emission levels in each of the RFP years, showing continuous progress towards the attainment levels for the San Joaquin Valley and the South Coast Air Basin, respectively. The RFP levels in both areas meet U.S. EPA requirements for demonstrating generally linear progress.

For the San Joaquin Valley, the estimates of emission levels in the RFP milestone years consider baseline emissions and emission reductions accomplished by District adopted rules. Approximately one year's worth of RFP reductions are reserved from existing emission reductions for contingency purposes for NOx and SOx in 2012. For PM2.5, SOx reductions that are in excess of those needed to meet RFP and contingency are reserved for PM2.5 contingency purposes.

For the South Coast, emission estimates for the milestone years considered baseline emissions, emission reductions from ARB adopted rules, and emission reductions accomplished by District adopted rules. All existing emission reductions are credited towards meeting the RFP milestones, with no reductions withheld for contingency purposes. This is appropriate given recent air quality progress in the South Coast.

For the 2014 attainment year, the additional emission reductions accrued in 2015 from baseline emission reductions are relied upon to meet the contingency requirements for both the San Joaquin Valley and the South Coast.

Updates to the Transportation Conformity Budgets

ARB is proposing to update the transportation conformity budgets applicable to the federal annual PM2.5 standard for the South Coast and San Joaquin Valley and establish a trading mechanism that will ensure that the impact of on-road emissions will be consistent with the attainment demonstration in future years. The basis for the trading mechanism is the SIP attainment modeling which established the relative contribution of each PM2.5 precursor pollutant. These updates account for the action taken by the Board in December to amend the truck and bus regulations to include better data and improvements to the emissions inventory, and reflects the current rulemaking calendar. Appendix D provides the SIP revision and description of the trading mechanism.

The Act requires metropolitan planning organizations (MPO) to demonstrate that their regional transportation plans (RTP) and transportation improvement programs (TIP) are consistent with progress toward and attainment of the NAAQS. MPOs use modeling to estimate regional emissions based on projected motor vehicle travel on the region's road and transit facilities.

The level of emissions for on-road motor vehicles, such as cars, trucks, and buses, consistent with SIP progress and attainment, is called a "motor vehicle emissions

budget.” For conformity, projected emissions from highway and transit use must be less than or equal to the budget. Budgets are developed during the air quality planning process in consultation with ARB, regional air districts, U.S. EPA, the U.S. Department of Transportation, and MPOs and provide for public review and comment.

The conformity budgets use the SIP on-road mobile source inventory which includes an updated heavy duty diesel truck and bus inventory that reflects the 2010 truck and bus regulatory amendments. This adjustment reflects the difference between the baseline SIP on-road motor vehicle emissions inventory from EMFAC2007 and the new truck and bus inventory that incorporates the impacts of both the recession and final regulations. The ton per day change in emissions is incorporated as a line item adjustment to the updated transportation conformity budgets (see “State Strategy Adjustments” line item in Tables A-1 and A-2 below).

Methodologically, the State Strategy Adjustments line item is then subtracted from the baseline SIP on-road motor vehicle emissions inventory from EMFAC2007. Importantly, the SIP baseline emissions inventory continues to be based on the activity data (e.g. vehicle miles travelled) provided by the SIPs.

This line item approach to account for State strategy reductions is consistent with the approach used to develop the originally submitted budgets. Following is an example of how the line item adjustment is calculated and used to develop the conformity budgets.

This example reflects the derivation of the 2014 NO_x budget for South Coast Air Basin.

- The combined NO_x emissions from medium and heavy heavy-duty trucks, school buses and other buses are retrieved from the baseline EMFAC2007 SIPs inventory (145 tpd NO_x) and the new truck inventory (132 tpd NO_x).
- The difference between these emissions is calculated (145 tpd – 132 tpd = 13 tpd NO_x).
- 13 tpd NO_x reflects the difference between the SIPs baseline inventory and the new truck inventory.
- 13 tpd is then added to the emission reductions in CY 2014 that were already identified in the SIPs from State and local strategies, including: Smog Check improvements and AB 923 Light and Medium-Duty High-Emitter Identification programs (13 tpd + 0.7 tpd = 13.7 tpd NO_x)
- 13.7 tpd NO_x is the total “State Strategy Adjustments” and is then entered into the conformity worksheet

The transportation conformity budget development worksheets are included in Tables A-1 and A-2 below, with the proposed SIPs budgets found in Appendix D.

Note that the “Adjustments to Baseline” line item originally included benefits for adopted regulations for solid waste collection and public fleet vehicles, heavy duty chip re-flash, and heavy duty truck idling, since the impacts of these regulations were not included in EMFAC2007. The benefits of these regulations are now reflected in the new truck and bus inventory baseline, and, therefore, are no longer included as a line item adjustment.

The remaining “Adjustments to Baseline” consist of reductions from AB 1493 (Pavley) and benefits from the on-road portion of the Carl Moyer program.

Table A-1
South Coast Air Basin
PM2.5 Transportation Conformity Emission Budget Worksheets*
(Annual Average – Tons per Day)

South Coast Air Basin	2012			2014		
	ROG	NOx	PM2.5	ROG	NOx	PM2.5
Baseline Inventory	162.6	350.8	17.5	146.1	305.7	17.2
Re-entrained Road Dust (Paved)			18.8			19.0
Re-entrained Road Dust (Unpaved)			1.0			1.0
Road Construction Dust			0.2			0.2
State Strategy Adjustments	-3.8	-21.2	-1.2	-9.2	-13.7	-2.7
Adjustments to Baseline	-0.4	-1.2	-0.1	-0.6	-1.3	-0.2
Budget	159	329	37	137	291	35

*Budgets are rounded up to the nearest ton.

Table A-2
San Joaquin Valley Air Basin
PM2.5 Transportation Conformity Emission Budget Worksheets*
(Annual Average – Tons per Day)

County		2012		2014	
		PM2.5	NOx	PM2.5	NOx
Fresno	Baseline Inventory	1.82	47.82	1.65	40.6
	State Strategy Adjustments	0.29	11.61	0.54	9.07
	Adjustments to Baseline	0.01	0.35	0.02	0.29
	Budget	1.6	35.9	1.1	31.3
Kern (SJV)	Baseline Inventory	2.98	81.58	2.63	70.28
	State Strategy Adjustments	1.02	31.77	1.42	26.29
	Adjustments to Baseline	0.01	0.57	0.01	0.40
	Budget	2.0	49.3	1.3	43.6
Kings	Baseline Inventory	0.59	16.00	0.51	13.52
	State Strategy Adjustments	0.18	5.33	0.25	4.20
	Adjustments to Baseline	0.00	0.12	0.00	0.09
	Budget	0.5	10.6	0.3	9.3
Madera	Baseline Inventory	0.50	12.30	0.46	10.62
	State Strategy Adjustments	0.10	3.04	0.17	2.55
	Adjustments to Baseline	0.00	0.10	0.01	0.09
	Budget	0.5	9.2	0.3	8.0
Merced	Baseline Inventory	1.19	29.15	1.05	24.67
	State Strategy Adjustments	0.35	9.11	0.49	7.16
	Adjustments to Baseline	0.01	0.23	0.01	0.18
	Budget	0.9	19.9	0.6	17.4
San Joaquin	Baseline Inventory	1.39	35.24	1.29	30.27
	State Strategy Adjustments	0.32	10.51	0.45	8.58
	Adjustments to Baseline	0.01	0.26	0.01	0.20
	Budget	1.1	24.5	0.9	21.5
Stanislaus	Baseline Inventory	0.84	22.25	0.76	18.69
	State Strategy Reductions	0.13	5.42	0.22	4.04
	Adjustments to Baseline	0.00	0.15	0.00	0.10
	Budget	0.8	16.7	0.6	14.6
Tulare	Baseline Inventory	0.75	20.87	0.69	17.88
	State Strategy Adjustments	0.11	5.05	0.20	4.05
	Adjustments to Baseline	0.00	0.16	0.01	0.14
	Budget	0.7	15.7	0.5	13.7

*Budgets are rounded up to the nearest tenth ton (0.1).

APPENDIX B: Rulemaking Calendar

**Table B-1
Proposed Update to 2007 State Strategy: PM2.5 SIP Measures**

	Agency	Actions	Implementation
Passenger Vehicles			
Smog Check Improvements	BAR	2007-2009	2008-2010; 2013 ¹
Expanded Vehicle Retirement (AB 118)	ARB/BAR	2007	2009
Modifications to Reformulated Gasoline Program	ARB	2007	2010
Trucks			
Cleaner In-Use Heavy-Duty Trucks	ARB	2007, 2008, 2010	2011-2015
Goods Movement Sources			
Auxiliary Ship Engine Cold Ironing & Other Clean Tech	EPA/ARB/ Local	2007, 2008	2010
Cleaner Main Ship Engines and Fuel ²		Fuel: 2008- 2011	2009-2015
		Engines: 2008	2011
Port Truck Modernization	ARB, Local	2007, 2008, 2010	2008-2020
Accelerated Intro. of Cleaner Line-Haul Locomotives ³	EPA/ARB	2008	2012
Clean Up Existing Harbor Craft	ARB	2007, 2010	2009-2018
Off-Road Equipment			
Cleaner In-Use Off-Road Equipment ⁴	ARB	2007, 2010	2009
Other Off-Road Sources			
New Emission Standards for Recreational Boats ⁵	ARB	See notes	See notes
Expanded Off-Road Recreational Vehicle Emission Standards ⁵	ARB	See notes	See notes
Enhanced Vapor Recovery for Above-Ground Storage Tanks	ARB	2008	2009-2016
Additional Evaporative Emission Standards ⁵		2009	2010-2012
		See notes	See notes
Areawide Sources			
Consumer Products Program	ARB	2008	2010
		2009	2013-2014
		2011	2014
Pesticide Regulation	DPR	2008, 2009	2009

¹In 2010, the State Legislature improved the effectiveness of the Smog Check program (AB 2289), requiring the Bureau of Automotive Repair to direct older vehicles to high performing auto technicians and test stations for inspection and certification. This new program will be effective in 2013.

²In July 2008, ARB adopted a regulation that applies to ships operating within 24 nautical miles (nm) of the California Coastline and visiting California ports. These vessels must use less polluting marine distillate fuel for their main engines, auxiliary engines, and boilers instead of heavy fuel oil. The first phase of cleaner fuel for ship main engines took effect in 2009, with a second phase currently scheduled in 2012. By 2015, the International Maritime Organization's fuel sulfur requirements for the North American Emission Control Area will match ARB's phase 2 standards and extend out to 200 miles from California Coastline.

³In 2008, ARB awarded Prop 1B bond funds to upgrade line-haul locomotive engines not already accounted for by enforceable agreements with the railroads. Those cleaner line-hauls will begin operation by 2012.

⁴Reductions begin in 2014.

⁵Expected action in 2013, with implementation schedules to be determined in rulemaking process.

APPENDIX C: Reasonable Further Progress Tables

Table C-1
San Joaquin Valley Air Basin
PM2.5 Reasonable Further Progress

	Direct PM2.5 (annual average, tpd)			
	2005	2009	2012	2014
Linear Benchmark	86	76	68	63
Estimated Emissions	86	73	69	63
Contingency (see SOx)	*NA	NA	0	NA
RFP Level	86	73	69	63

	NOx (annual average, tpd)			
	2005	2009	2012	2014
Linear Benchmark	575	449	354	291
Estimated Emissions	575	381	328	291
Contingency	NA	NA	26	NA
RFP Level	575	381	354	291

	SOx (annual average, tpd)			
	2005	2009	2012	2014
Linear Benchmark	26	25	24	24
Estimated Emissions	26	23	20	21**
Contingency (for SOx and PM2.5)	NA	NA	3	NA
RFP Level	26	23	23	24

*NA: Not applicable

** Note: As a result of control measures already adopted to date, the 2014 RFP target for SOx has already been surpassed.

Table C-2
South Coast Air Basin
PM2.5 Reasonable Further Progress

	Direct PM2.5 (annual average, tpd)			
	2002	2009	2012	2014
Linear Benchmark	99	91	88	86
Estimated Emissions	99	89	89	86
Contingency	*NA	NA	0	NA
RFP Level	99	89	89	86

	NOx (annual average, tpd)			
	2002	2009	2012	2014
Linear Benchmark	1093	724	566	460
Estimated Emissions	1093	677	582	460
Contingency	NA	NA	0	NA
RFP Level	1093	677	582	460

	ROG (annual average, tpd)			
	2002	2009	2012	2014
Linear Benchmark	844	628	534	474
Estimated Emissions	844	563	514	474
Contingency	NA	NA	0	NA
RFP Level	844	563	514	474

	SOx (annual average, tpd)			
	2002	2009	2012	2014
Linear Benchmark	53	34	26	20
Estimated Emissions	53	43	26	20
Contingency	NA	NA	0	NA
RFP Level	53	43	26	20

*NA: Not applicable

APPENDIX D: Transportation Conformity Budgets

Table D-1
South Coast Air Basin
Proposed PM2.5 Transportation Conformity Emission Budgets*
(Annual Average – Tons per Day)

	2012			2014		
	ROG	NOx	PM2.5	ROG	NOx	PM2.5
South Coast Air Basin	159	329	37	137	291	35

*Budgets are rounded up to the nearest ton.

Per Section 93.124 of the conformity regulations, for transportation conformity analyses using these budgets in analysis years beyond 2014, a trading mechanism is established to allow future decreases in NOx emissions from on-road mobile sources to offset any on-road increases in PM2.5, using a NOx:PM2.5 ratio of 10:1. This trading mechanism will only be used, if needed, for conformity analyses for years after 2014. To ensure that the trading mechanism does not impact the ability to meet the NOx budget, the NOx emission reductions available to supplement the PM2.5 budget shall only be those remaining after the 2014 NOx budget has been met. Clear documentation of the calculations used in the trading should be included in the conformity analysis.

In addition, at the time the 2007 SIP was adopted, a 2009 budget year was a necessary MPO analysis year for federal transportation conformity purposes. Since 2009 has passed, it is no longer applicable as a conformity analysis year, and was therefore not included in these budgets.

Table D-2
San Joaquin Valley Air Basin
Proposed PM2.5 Transportation Conformity Emission Budgets*
(Annual Average – Tons per Day)

County	2012		2014	
	PM2.5	NOx	PM2.5	NOx
<i>Fresno</i>	1.6	35.9	1.1	31.3
<i>Kern (SJV)</i>	2.0	49.3	1.3	43.6
<i>Kings</i>	0.5	10.6	0.3	9.3
<i>Madera</i>	0.5	9.2	0.3	8.0
<i>Merced</i>	0.9	19.9	0.6	17.4
<i>San Joaquin</i>	1.1	24.5	0.9	21.5
<i>Stanislaus</i>	0.8	16.7	0.6	14.6
<i>Tulare</i>	0.7	15.7	0.5	13.7

*Budgets are rounded up to the nearest tenth ton (0.1).

Per Section 93.124 of the conformity regulations, for transportation conformity analyses using these budgets in analysis years beyond 2014, a trading mechanism is established to allow future decreases in NOx emissions from on-road mobile sources to offset any on-road increases in PM2.5, using a NOx:PM2.5 ratio of 9:1. This trading mechanism will only be used, if needed, for conformity analyses for years after 2014. To ensure that the trading mechanism does not impact the ability to meet the NOx budget, the NOx emission reductions available to supplement the PM2.5 budget shall only be those remaining after the 2014 NOx budget has been met. Clear documentation of the calculations used in the trading should be included in the conformity analysis.

In addition, at the time the 2007 SIP was adopted, a 2009 budget year was a necessary MPO analysis year for federal transportation conformity purposes. Since 2009 has passed, it is no longer applicable as a conformity analysis year, and was therefore not included in these budgets.

APPENDIX E: Additional Documentation

Appendix E includes additional documentation and data supporting this Progress Report and SIP Revision. It includes additional detail regarding the emissions accounting methodology, supporting data for the progress Tables 2 and 3 found in the body of the report, and information on how ARB staff accounted for the impacts of the recession

SIP Accounting

The Clean Air Act requires the use of air quality modeling to determine the “carrying capacity” or “SIP emissions target”; that is, the maximum allowable emission levels that the nonattainment area can accommodate while attaining the standard.

While the adopted SIP contains a list of category-specific measures with regulatory timelines and expected reductions, ARB’s enforceable commitment is to meet the emissions levels needed for attainment with sufficient aggregate emission reductions, including any from actual changes in emissions.

To track progress toward the emissions target, this report uses a simple emissions accounting approach that explicitly show the impact of the recession and the benefit of the regulations ARB and the local air districts have approved since the PM2.5 SIPs were adopted. The approach looks like

$$(Emissions\ Inventory) - (Emission\ Reductions\ Achieved) = (Remaining\ Emissions)$$

Where:

- Emissions Inventory* = Amount of PM2.5 and PM2.5 precursor emissions the base line
- Emission Reductions Achieved* = Amount of emissions that have been reduce either through adopted regulations or actual emission decreases due to the recession
- Remaining Emissions* = The PM2.5 and PM2.5 precursor emissions level that is forecast to be remaining in the attainment year with the impacts of both regulations and the recession.

This approach keeps the focus on meeting the ultimate goal of the emission target derived from air quality modeling. It also has the advantage of explicitly showing the impacts of both the regulatory actions and the recession that an emissions accounting that looks just at regulatory reductions does not.

Progress Details

The following series of tables provide additional documentation for Tables 2 and 3, showing progress to date for both the South Coast and San Joaquin Valley.

South Coast Air Basin 2014 Progress to Date on ARB Rules

NOx Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Smog Check Improvements (BAR)	134.2	134.2	131.6
Cleaner In-Use Heavy-Duty Trucks & Buses	136.0	151.2	132.6
Cleaner In-Use Off-Road Equipment (over 25hp)	96.9	28.0	27.5
Ship Auxiliary Engine Cold Ironing & Clean Tech.	37.2	23.7	15.6
Cleaner Main Ship Engines and Fuel - Main Engines	33.4	38.5	20.9
Accelerated Intro. Of Cleaner Line-Haul Locomotives	18.3	18.3	18.3
Clean Up Existing Harbor Craft	15.7	15.2	11.1
Cargo Handling Equipment	5.2	3.2	3.2
New Emission Standards for Recreational Boats	11.0	11.0	11.0
Co-Benefits from Greenhouse Gas Reduction Measures	0.0	0.0	0.0
All other local, state, and federal emissions	165	166	159
Total 2014 forecast with rules adopted to date	653	589	530

ROG Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Smog Check Improvements (BAR)	132.1	132.1	123.5
Cleaner In-Use Heavy-Duty Trucks & Buses	10.2	8.7	5.4
Cleaner In-Use Off-Road Equipment (over 25hp)	13.4	2.6	2.5
Ship Auxiliary Engine Cold Ironing & Clean Tech.	0.7	0.9	0.7
Cleaner Main Ship Engines and Fuel - Main Engines	0.2	1.9	1.4
Accelerated Intro. Of Cleaner Line-Haul Locomotives	2.3	2.3	2.3
Clean Up Existing Harbor Craft	0.7	1.2	1.1
Cargo Handling Equipment	0.6	0.3	0.3
New Emission Standards for Recreational Boats	37.9	37.9	37.9
Expanded Off-Road Rec. Vehicle Emission Standards	6.7	6.7	6.7
Consumer Products Program	102.6	102.6	96.7
All other local, state, and federal emissions		221	206
Total 2014 forecast with rules adopted to date		518	485

Progress Report on Implementation of PM2.5 State Implementation Plans (SIP) for the South Coast and San Joaquin Valley Air Basins and Proposed SIP Revisions

PM2.5 Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Smog Check Improvements (BAR)	7.8	7.8	7.5
Cleaner In-Use Heavy-Duty Trucks & Buses	5.8	6.0	3.4
Cleaner In-Use Off-Road Equipment (over 25hp)	4.9	1.3	1.3
Ship Auxiliary Engine Cold Ironing & Clean Tech.	0.6	0.5	0.4
Cleaner Main Ship Engines and Fuel - Main Engines	2.6	3.9	0.4
Accelerated Intro. Of Cleaner Line-Haul Locomotives	0.7	0.7	0.7
Clean Up Existing Harbor Craft	0.7	0.6	0.4
Cargo Handling Equipment	0.1	0.1	0.1
All other local, state, and federal emissions		74	73
Total 2014 forecast with rules adopted to date		95	87

SOx Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Cleaner In-Use Heavy-Duty Trucks & Buses	0.3	0.3	0.3
Ship Auxiliary Engine Cold Ironing & Clean Tech.	1.1	1.1	0.8
Cleaner Main Ship Engines and Fuel - Main Engines	20.7	38.7	1.7
All other local, state, and federal emissions		21	17
Total 2014 forecast with rules adopted to date		61	20

**San Joaquin Valley Air Basin
2014 Progress to Date on ARB Rules**

NOx Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Smog Check Improvements (BAR)	41	41.2	40.5
Cleaner In-Use Heavy-Duty Trucks & Buses	156.9	111.3	110.2
Cleaner In-Use Off-Road Equipment (over 25hp)	31.4	13.7	13.4
Accelerated Intro. Of Cleaner Line-Haul Locomotives	19.9	19.9	19.9
New Emission Standards for Recreational Boats	3.5	3.5	3.5
All other local, state, and federal emissions		123	110
Total 2014 forecast with rules adopted to date		313	298

PM2.5 Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Smog Check Improvements (BAR)	2.5	2.5	2.4
Cleaner In-Use Heavy-Duty Trucks & Buses	6.2	4.3	2.6
Cleaner In-Use Off-Road Equipment (over 25hp)	1.4	0.6	0.6
Accelerated Intro. Of Cleaner Line-Haul Locomotives	0.5	0.5	0.5
All other local, state, and federal emissions		64	59
Total 2014 forecast with rules adopted to date		72	65

SOx Emissions (tpd)			
	SIP	Current	
	2014 Baseline	New 2014 Baseline	2014 Remaining Emissions
Cleaner In-Use Heavy-Duty Trucks & Buses	0.3	0.2	0.2
Cleaner In-Use Off-Road Equipment (over 25hp)	0.0	0.0	0.0
All other local, state, and federal emissions		24	21
Total 2014 forecast with rules adopted to date		24	21

Assessing the Impacts of the Recession on Good Movement Related Emissions

This section documents the methodologies used to account for the impacts of the economic recession on the emission inventories for trucks, in-use off-road equipment, ocean-going vessels, and cargo handling equipment. Links to more detailed information are provided.

General Methodology

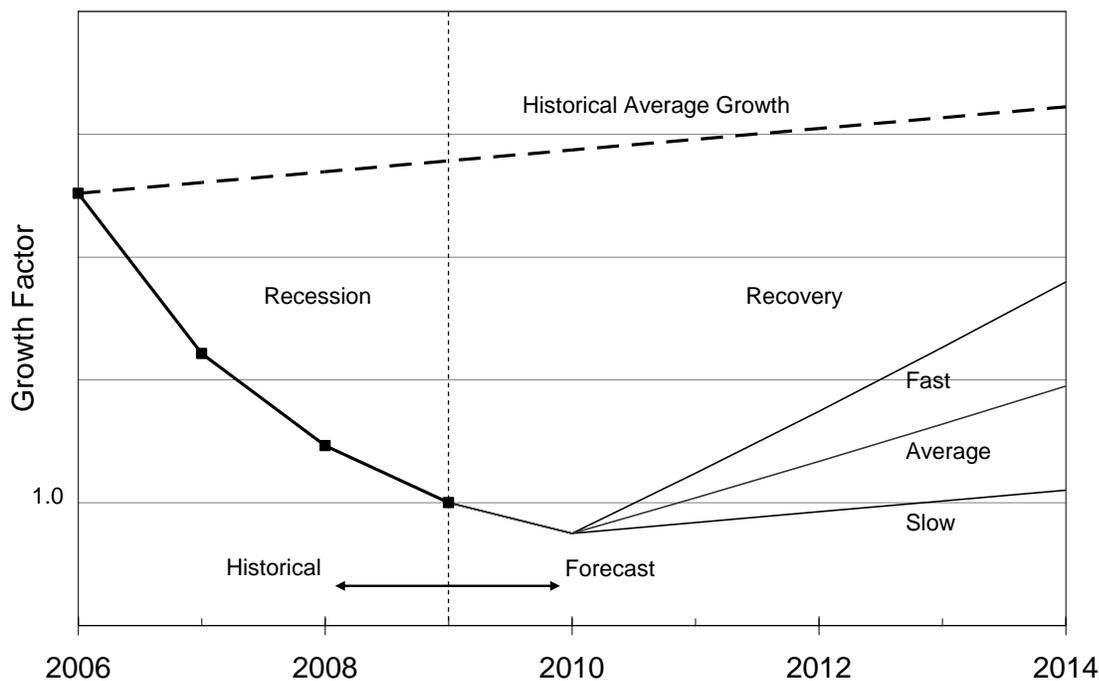
The economic recession officially started in December of 2007 and ended in June 2009. It was the most severe since the Great Depression and had a severe impact on California industries. The emission inventories for trucks, in-use off-road equipment, ocean-going vessels, and cargo handling equipment have all been adjusted to its impact.

To understand the impact of reduced activity on future emissions, staff developed both a fast and slow recovery scenario to bound the recovery possibilities.

The fast recovery scenario assumes that total activity would return to projected historically average levels in 2017 and then grow at the historical average rate after that. This scenario is based on the Congressional Budget Office forecast which indicated that real gross domestic product at a nationwide level will converge with potential gross domestic product trends no later than 2015. Coupling this forecast with the assumption that California's recovery will lag the nation by several years yielded the 2017 recovery date assumed for the fast recovery scenario.

In the slow recovery scenario, staff assumed that activity would be permanently depressed relative to historical levels, but continue to grow at the average historical growth rate beginning in 2011.

While the fast and slow scenarios provide a reasonable bound of possible recoveries, for rulemaking purposes and for this SIP update, a single forecast is needed. For this, staff assumed an average recovery midway between the fast and slow recoveries. The chart below illustrates the two bounding scenarios and the assumed average used in this report. This is the same approach developed to provide economic relief through last year's regulatory amendments to the diesel trucks, buses, and off-road equipment rules.



In-Use On-Road Trucks & Buses

Staff updated the inventory for diesel trucks and buses to support ARB consideration of regulatory amendments to provide economic relief last December 2010. The update was comprehensive and included a revised population, new regional allocation factors, lifetime odometer assumptions, revised growth rates, forecasted vehicle age distributions to reflect the impact of the economic recession, and updated out-of-state vehicle activity. These changes are described in detail at <http://www.arb.ca.gov/regact/2010/truckbus10/truckbus10.htm>.

This progress report required emission estimates for years and pollutants (SOx and ROG) that were not needed for the 2010 rulemaking. Staff used the same methodologies and principles used for the December 2010 regulatory inventory to develop estimates for the other years and pollutants in this report.

In-Use Off-Road Equipment

Just as for trucks and buses, staff completed a comprehensive revision to the inventory for off-road equipment to support ARB consideration in December 2010 of regulatory amendments to provide economic relief. Updates were made to the population of equipment, annual activity, load and future equipment sales. These changes are described in detail at <http://www.arb.ca.gov/regact/2010/offroadlsi10/offroadlsi10.htm>.

This progress report required emission estimates for years and pollutants (SO_x, ROG and total organic gases (TOG)) that were not needed for the 2010 rulemaking. Staff used the same methodologies and principles used for the December 2010 regulatory inventory to develop estimates for the other years and pollutants in this report.

Ocean-Going Vessels (OGV)

The OGV inventory in the PM2.5 SIP included vessel-specific data, improved vessel traffic network, vessel-specific hoteling and anchorage times, and improved vessel speeds. Staff has refined that inventory since then to support rulemaking in 2008 on the sulfur content in fuel. Staff has further updated that 2008 inventory in anticipation of amendments to the same fuel rule later this year. That information is used in this report. In general, the updates include improved algorithms for vessel speed reduction (VSR), auxiliary engine power, and estimating low load adjustment factors. Recession impacts are based on container throughput statistics for the Ports of Los Angeles, Long Beach and Oakland. OGV activity was down about 25% for the combined ports of Los Angeles and Long Beach and about 15% for the Port of Oakland between 2006 and 2009.

More information is available at <http://www.arb.ca.gov/ports/marinevess/ogv.htm>.

Cargo Handling Equipment (CHE)

An update to the cargo handling equipment (CHE) inventory is currently underway using new information about the population, equipment usage, impacts of the recession and fleet turnover. The new model is still under development and not available for use in this report; therefore, staff scaled the existing PM2.5 SIP CHE emissions inventory to account for the new data.

The inventory used for the SIP was based on population and activity values from a 2001 to 2004 survey. As part of the adopted regulation, equipment owners were required to report the population of their equipment to ARB. Additionally, between 2005 and 2009 the ports and rail yards have conducted their own emissions inventories. This new information indicates that the total state population is slightly higher than originally assumed. These same data sources include updates to activity and load factor. However, changes in activity and load factors offset these increases in the population.

To account for these changes, staff compared baseline 2006 emissions from the original inventory to the draft updated inventory baseline. As discussed in a recent February workshop, emissions for PM and NO_x emissions are approximately 20 percent and 27 percent lower, respectively. For this report staff assumed 2006 emissions were 27 percent lower than in the SIP. To forecast emissions forward from 2006, staff compared the original growth assumptions for CHE to the growth in port truck activity in the 2010 Truck and Bus Rule inventory model. Assuming that the CHE activity relates

chiefly to the movement of shipping containers, staff reduced growth by approximately 20%.

More information is available at <http://www.arb.ca.gov/ports/cargo/cargo.htm>.

Commercial Harbor Craft

In 2007 ARB adopted a commercial harbor craft regulation and adopted amendments to the original rule in 2010. Updates were made to the population of equipment, annual activity, and regional allocation. These changes are described in detail at <http://www.arb.ca.gov/ports/marinevess/harborcraft/hcdocuments.htm#regulatory>.

APPENDIX F: Revisions to 2007 PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley, March 2011

**Revisions to 2007 PM_{2.5} and Ozone State
Implementation Plan for South Coast Air
Basin and Coachella Valley**

March 2011

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

Executive Summary

This State Implementation Plan (SIP) revision updates the implementation status of the AQMD control measures to meet the 2015 PM2.5 attainment, and includes revisions to the control measure adoption schedule and modifications to the emissions reduction commitment to reflect changes made to the inventory resulting from CARB's December 2010 revisions to the on-road truck and off road equipment rules. The SIP revision provided addresses key elements in U.S. Environmental Protection Agency's (U.S. EPA) proposed partial approval and partial disapproval of the 2007 PM2.5 SIP for the South Coast Air Basin (Basin). The SIP revision retains the AQMD's proposal for contingency measures and also references and relies on CARB's proposed contingency measures that rely on reductions achieved through adopted rules that go beyond the RFP requirement. In addition, the SIP revision re-initiates its request that U.S. EPA voluntarily accept reduction responsibility for 10 TPD NOx emissions in 2014 for federal sources in the 2007 SIP, but provides a commitment to obtain a "fair share" additional 1 TPD NOx reductions in 2014 should U.S. EPA reject this request. Staff expects CARB to commit to its "fair share" of 9 TPD NOx reductions if necessary. AQMD is committing to provide 1.0 TPD NOx emissions reductions in the event that the backstop proposal becomes necessary.

Background

On November 22, 2010 U.S. EPA issued a notice of proposed partial approval and partial disapproval of the 2007 South Coast State Implementation Plan (SIP) for the 1997 Fine Particulate Matter Standards and the corresponding 2007 State Strategy. U.S. EPA proposed to approve the plan's inventory and regional modeling analyses; however it proposed to disapprove the attainment demonstration because it relies too extensively on commitments to emissions reductions in lieu of fully adopted and submitted rules. While the District has adopted enforceable rules that achieve more than 90 percent of its SIP emissions reductions commitment, the State Strategy and the recent actions to modify the on- and off-road emissions from heavy duty vehicles have not achieved the same percentage or been submitted to U.S. EPA as part of the SIP commitment. The notice also cited deficiencies in the SIP's contingency measures specifying the need for measures that are either fully adopted or otherwise ready for quick implementation and a trigger mechanism that achieves emissions reduction equivalent to one year of RFP. In addition, U.S. EPA affirmed that it would not accept the Plan's assignment of 10 tons per day (TPD) NOx emissions reductions to EPA as a contributing factor to its decision.

Revisions to PM_{2.5} and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

2007 AQMP and State Strategy Commitments

The 2007 Air Quality Management Plan was adopted by the SCAQMD Governing Board at its June 22, 2007 meeting and forwarded to CARB for inclusion in the SIP. The California Air Resources Board adopted the SIP, and the State Strategy for emissions reductions to meet the 2015 PM_{2.5} standard at its September 27, 2007 meeting. The two components of the SIP were submitted to U.S. EPA on November 16, 2007 for approval. As part of its share, the 2007 AQMP committed the District to reduce 18.8 TPD NO_x, 10 TPD VOC, 2.9 TPD SO_x and 2.9 TPD PM_{2.5} by 2014 of the needed emissions reductions to demonstrate attainment.

Update of the 2007 AQMP Implementation Status

The SCAQMD has fulfilled the overwhelming majority of its emissions reductions commitments specified in the 2007 SIP. Table-1 summarizes the progress achieved toward fulfilling SCAQMD's emissions reductions commitments to attain the 1997 PM_{2.5} annual and federal 8-hour ozone standards by the required dates. Through January 31, 2011, the SCAQMD Governing Board has amended and adopted 13 rules achieving approximately 96 percent of the District's SIP commitment outlined in the 2007 AQMP. The majority of these rules have been submitted to U.S. EPA and approved as part of the SIP. Several recently adopted District rules have been submitted to CARB to be submitted to and subsequently be evaluated by U.S. EPA.

The 96 percent achievement rate of the District's SIP commitment outlined in the 2007 AQMP represents the balance of emissions reductions achieved by calculating the relative contributions of VOC, NO_x, PM_{2.5}, and SO_x based on PM_{2.5} formation potential. As summarized in CARB's staff report Proposed 2007 State Implementation Plan for the South Coast Air Basin – PM_{2.5} Annual and 8-Hour Average Ozone National Ambient Air Quality Standards (Appendix C, Tables-2 and -3) the relative contribution of the PM_{2.5} precursor emissions can be normalized to provide equivalent formation potential on a ton per day (TPD) basis. The common methodology chosen to express the formation potential is as equivalent NO_x emissions reductions whereby 1-TPD VOC reduction is equivalent to 0.43 TPD NO_x, 1-TPD directly emitted PM_{2.5} is equivalent to 9.86 TPD NO_x, and 1-TPD SO_x is equivalent to 15.03 TPD NO_x. By applying these factors to the 2007 AQMP PM_{2.5} SIP the District committed to 87.43 TPD equivalent NO_x reductions and through January, 2011 has achieved 83.89 TPD equivalent NO_x reductions. If the balance were to be met by NO_x alone, they are equivalent to 3.53 TPD of NO_x. Similarly, they can be met by 0.36 TPD of PM_{2.5} or 0.24 TPD of SO_x, based

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

on each pollutant's effectiveness in PM2.5 formation. The District will continue to pursue further reductions of each of these pollutants.

Tables 2 through Table 5 summarize the implementation status of each SCAQMD control measure with reductions attained vs. original SIP commitments. As stated in Chapter 4 of the 2007 AQMP (p. 4-2), substitution is allowed between measures to meet the overall SIP tonnage commitment. Table 2 through Table 5 note where such substitution occurs.

Revisions to Reduction Commitment

In Table 3, the 2014 emissions reduction commitment for the SOON Program has been revised from 12 TPD NOx reduction to 4 TPD to reflect ARB's update of the off-road emissions inventory in December 2010. The revised off-road inventory due to better information on equipment population, load factor, and expected activity level has resulted in lower baseline emissions. In other words, some of the reductions expected from this measure have already occurred due to reductions in the baseline inventory. Although SCAQMD's funding commitment and percent control efficiency for the SOON program remain the same, the expected reductions due to this measure are lowered from 12 TPD to 4 TPD. This change does not result in higher emissions in the air. Should the economy recover to the levels projected in the 2007 SIP by 2014, the expected reductions can reach 8 TPD.

Revisions to Implementation Schedule

A limited number of revisions to the 2014 implementation dates are proposed in Tables 2 through 5. Control measure EGM-01 rule adoption moves from 2010 to 2012 with full implementation for 2023. Control measure BCM-05 rule adoption is moved from 2010 to 2011-2012.

Requirements for Contingency Measures

The CAA requires that non-attainment area SIPs contain sufficient contingency measures such that upon implementation of those measures additional emissions reduction of up to 3 percent of the emissions in the adjusted base year would be achieved in the year following the year where the failure to meet milestone emission reduction targets or attain the NAAQS was observed. The CAA requires that the contingency measures be fully adopted or otherwise ready for quick implementation, with a trigger mechanism and implementation schedule that quantifies emissions reductions.

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

The Final 2007 AQMP contained four contingency control measures (2007 AQMP, Table 9-1) to address the requirements of the CAA. The contingency control measures will be retained with a trigger for implementation of non-attainment of the PM2.5 standard by 2015.

As a practical matter, all feasible measures, to adopt as rules, are already included as 2007 AQMP main control strategy measures and thus are not available for use as contingency measures. However, U.S. EPA may continue to conclude that this is not sufficiently quick implementation. Therefore, the AQMD would also rely on implementation of CARB's contingency measures for the 2007 SIP as a whole, which are already adopted.

Federal Measures Assignment

A final key element in the notice of disapproval was the U.S. EPA's rejection of the SIP's assignment to EPA of 10 TPD NO_x emissions reductions. The U.S. EPA cited that the CAA does not authorize a State to assign responsibility to the federal government for meeting SIP requirements. U.S. EPA did however recognize that the authority and responsibility to regulate certain nationwide sources is within its jurisdiction. The control measure in question requested federal funding to mitigate locomotive emissions. The sources in question would be those less well controlled than California regulated sources and the measure would be implemented to acquire equivalent emissions reduction to those estimated if Tier 4 NO_x locomotive engine standards were enforceable in 2014.

SCAQMD understands that U.S. EPA's position is that a state may not, under the current Clean Air Act structure, unilaterally assign any portion of the SIP responsibility to U.S. EPA. However, we do not believe there is any prohibition on U.S. EPA voluntarily accepting such a responsibility. In this case it is only fair to do so, given the large percentage of remaining PM2.5 precursor emissions, after implementation of SCAQMD and CARB measures that is attributable to federally-regulated sources.

Should U.S. EPA continue to not accept assignment for this measure, SCAQMD will work with CARB to modify or develop control measures that commit equivalent emissions reductions to assure PM2.5 attainment to the extent needed. As part of its "fair share" the AQMD is committing an additional 1 TPD NO_x emissions reduction in 2014 with ARB assuming the bulk of the federal assignment.

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

Table-1
 SCAQMD PM2.5 SIP Implementation Status
 for the 2007 AQMP (TPD)

Pollutant	SIP Commitment by 2014		
	Commitment	Achieved	Balance*
VOC	10.40	14.40	+4.00
NOx	10.80	7.60	-3.20
PM2.5	2.90	1.00	-1.90
SOx	2.90	4.01	+1.11

* If the balance for each pollutant were converted to NOx-equivalent values, the remaining tons required to be obtained would be 3.53 TPD NOx, which are still scheduled to be obtained by 2014 in NOx-equivalent reductions. Or, they can be met by 0.36 TPD of PM2.5 or 0.24 TPD of SOx, based on each pollutant's effectiveness in PM2.5 formation. The District will continue to pursue further reductions of each of these pollutants.

Table-2

2007 AQMP Emission Reduction Commitment by Measure/Adoption Date (VOC)¹

Control Measure #	Control Measure Title	Adoption Date		Implementation Date		2014 Reductions (TPD)		2023 Reductions (TPD)	
		Commitment	Achieved	Commitment	Achieved	Commitment	Achieved	Commitment	Achieved
MOB-05	AB923 Light-Duty Vehicle High-Emitter Identification Program [NOx, VOC] ^{(a)(b)}	On-going	On-going	2007-2020	On-going	0.8	0	0.7	0
2007 Total									
FLX-02	Petroleum Refinery Pilot Program [VOC and PM2.5]	2008	(a)	2010		0.7	0	1.6	0
CTS-01	Emission Reductions from Lubricants [VOC][R1144]	2008	2009	2010	2011	1.9	3.9	2.0	4.2
MOB-06	AB923 Medium-Duty Vehicle High-Emitter Identification Program [NOx, VOC] ^{(a)(b)}	2008	On-going	2010-2020	On-going	0.5	0	0.6	0
FUG-04	Pipeline and Storage Tank Degassing[VOC]- R1149	2007	2008	2008-2009	2008	NA	0.04	NA	0.04
BCM-03	Emission Reductions from Wood Burning Fireplaces and Wood Stoves [All]	2007-2008	2008	2008-2014	2008-2014	NA	0.44	NA	0.70
MCS-07	All Feasible Measures (R1125)	On-going	2008	2010-2020	2008	NA	0	NA	0
2008 Total									
FUG-02	Emission Reductions from Gasoline Transfer and Dispensing Facilities [VOC]	2009	(c)	2010-2012		3.7	0	4.0	0
MCS-05	Emission Reductions from Livestock Waste [VOC]	2009	(a)	2011		0.8	0	0.6	0.00
EGM-01	Emission Reductions from New or Redevelopment Projects [NOx, VOC, PM2.5] ^(d)	2012		Beginning 2014		N/A	0	0.5	0
2009 Total									
						4.5	0.0	5.1	0.0

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

Table-2 Continued

2007 AQMP Emission Reduction Commitment by Measure/Adoption Date (VOC) continued

Control Measure #	Control Measure Title	Adoption Date		Implementation Date		2014 Reductions (TPD)		2023 Reductions (TPD)	
		Commitment	Achieved	Commitment	Achieved	Commitment	Achieved	Commitment	Achieved
MCS-01*	Facility Modernization [NOx, VOC, PM]-R1110.2 ^(a) (e)	On-going	2008+	Beginning 2012	2011+	2.0	0.3	9.2	0.3
CTS-03	Consumer Products Certification and Emissions Reductions from Use of Consumer Products at Institutional and Commercial Facilities [VOC] ^(f)	2007-2010		2010-2020		NA	0	NA	0
CTS-04	Emission Reductions from the Reduction of VOC Content of Consumer Products not Regulated by the State Board [VOC][R1143] ^(g)	2008-2010	2009	2010-2020	2011	NA	9.7	NA	10.1
2010 Total						2.0	10.0	9.2	10.4
Total SIP Commitment						10.2	14.1	17.9	5.5

¹ 2014 reductions estimated in average annual day, 2023 in planning inventory.

^(a) SIP commitment for the PM2.5 Plan was met via excess reductions achieved from CTS-04 (R1143).

^(b) The SOON and AB923 incentive programs are on track to achieve the targeted reductions by 2014.

^(c) AQMD lacks legal authority to adopt the control concept in the measure. SIP reduction commitment was met via excess reductions achieved from the CTS-04 (R1143).

^(d) No SIP emission reduction commitment for the PM2.5 Plan. Rulemaking is delayed due to potential co-benefits of SB375 reduction targets.

^(e) AQMD will continue to implement this measure to meet the overall SIP reduction commitment for 2023.

^(f) CTS-03 was adopted by CARB in November 2010. Emission Reductions from CTS-04 are not included in AQMD's SIP commitments and there is no double counting in emission reductions relative to CARB regulations.

* NOx emission reductions taken in 2008; PM emission reductions taken in 2009; VOC emission reductions taken in 2010.

NA: Not applicable, no SIP Reductions quantified in the 2007 AQMP.

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

Table-3

2007 AQMP Emission Reduction Commitment by Measure/Adoption Date (NOx)¹

Control Measure #	Control Measure Title	Adoption Date		Implementation Date		2014 Reductions (TPD)		2023 Reductions (TPD)	
		Commitment	Achieved	Commitment	Achieved	Commitment	Achieved	Commitment	Achieved
MOB-05	AB923 Light-Duty Vehicle High-Emitter Identification Program [NOx, VOC] ^(a)	On-going	On-going	2007-2020	On-going	0.4	0	0.4	0
2007 Total									
CMB-01	NOx Reduction from Non-RECLAIM Ovens, Dryers and Furnaces [NOx][R1147]	2008	2008	Beginning 2010	2010	3.5	3.5	4.1	4.1
MOB-06	AB923 Medium-Duty Vehicle High-Emitter Identification Program [NOx, VOC] ^(a)	2008	On-going	2010-2020	On-going	0.5	0	0.6	0
MCS-01*	Facility Modernization [NOx, VOC, PM]-R1110.2, PR1146, PR1146.1	2008-2010	2008+	Beginning 2012	2011	1.6	2.17	2.2	3.15
BCM-03	Emission Reductions from Wood Burning Fireplaces and Wood Stoves [All][R445]	2007-2008	2008	2008-2014	2008-2014	NA	0.06	NA	0.10
	SOON Program ^{(a)(b)}	2008	2008	2014	2008-2014	4-8	1.8	NA	NA
2008 Total									
CMB-03	Further NOx Reductions from Space Heaters [NOx]	2009	2009	Beginning 2012	2012-2043	0.8	0.1	1.1	3.0
EGM-01	Emission Reductions from New or Redevelopment Projects [NOx, VOC, PM2.5] ^(c)	2012		Beginning 2014		0		0.8	
2009 Total									
Total SIP Commitment^{(d)(e)}									

¹ 2014 reductions estimated in average annual day, 2023 in planning inventory.

^(a) The SOON and AB923 incentive programs are on track to achieve the targeted reductions by 2014.

^(b) A revised SIP commitment of 4 TPD reflects ARB's update on the off-road emissions inventory in December 2010 and maintains the same control efficiency.

The upper range of 8 TPD excludes the impact of recession.

^(c) No SIP emission reduction commitment for the PM2.5 Plan. Rulemaking is delayed due to potential co-benefits of SB375 reduction targets.

^(d) The SIP shortfall for the 2014 reduction commitment was met via excess reductions achieved from the SOx RECLAIM amendments (CMB-02).

^(e) AQMD commits an additional 1 TPD of NOx, if necessary, as a backstop measure should U.S. EPA not voluntarily accept responsibility for federal sources in the 2007 SIP.

* NOx emission reductions taken in 2008; PM emission reductions taken in 2009; VOC emission reductions taken in 2010.

NA: Not applicable, no SIP Reductions quantified in the 2007 AQMP.

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Table-4

2007 AQMP Emission Reduction Commitment by Measure/Adoption Date (PM2.5)

Control Measure #	Control Measure Title	Adoption Date		Implementation Date		2014 Reductions (TPD)		2023 Reductions (TPD)	
		Commitment	Achieved	Commitment	Achieved	Commitment	Achieved	Commitment	Achieved
BCM-03	Emission Reductions from Wood Burning Fireplaces and Wood Stoves [PM2.5]	2007-2008	2008	2008-2014	2008-2014	1.0	1.0	1.6	1.6
FLX-02	Petroleum Refinery Pilot Program [VOC and PM2.5] ^(a)	2008		2010		0.4		0.4	
2008 Total									
EGM-01	Emission Reductions from New or Redevelopment Projects [NOx, VOC, PM2.5] ^(b)	2012		Beginning 2014				0.5	
MCS-01*	Facility Modernization [NOx, VOC, PM] ^{(a)(c)}	On-going		Beginning 2012		0.4		1.7	
2009 Total									
BCM-05	PM Emission Reductions from Under-fired Charbroilers [PM2.5] ^(d)	2011-2012		2014		1.1		1.2	
2010 Total									
Total SIP									

^(a) Reduction commitment for the PM2.5 SIP was met via excess reductions achieved from the 2010 SOx RECLAIM amendments.

^(b) No SIP emission reduction commitment for the PM2.5 Plan. Rulemaking is delayed due to potential co-benefits of SB375 reduction targets.

^(c) R1155 was adopted as part of MCS-01 implementation in 2010, but PM2.5 reduction potential cannot be quantified. AQMD will continue to seek opportunities to further implement this measure.

^(d) Reduction commitment for the PM2.5 SIP was met via excess reductions achieved from the 2010 SOx RECLAIM amendments (CMB-02) and VOC reductions from CTS-03. The rulemaking will entail two phases with control equipment testing, certification, and deployment in 2011 and development of regulatory requirements in 2012.

* NOx emission reductions taken in 2008; PM emission reductions taken in 2009; VOC emission reductions taken in 2010.

NA: Not applicable, no SIP Reductions quantified in the 2007 AQMP.

Revisions to PM2.5 and Ozone State Implementation Plan for South Coast Air Basin and Coachella Valley

Table-5

2007 AQMP Emission Reduction Commitment by Measure/Adoption Date (SOx)

Control Measure #	Control Measure Title	Adoption Date		Implementation Date		2014 Reductions (TPD)		2023 Reductions (TPD)	
		Commitment	Achieved	Commitment	Achieved	Commitment	Achieved	Commitment	Achieved
CMB-02	Further SOx Reductions for RECLAIM (BARCT) [SOx]	2008	2010	2011-2014	2013-2019	2.9	4.0	2.9	5.7
BCM-03	Emission Reductions from Wood Burning Fireplaces and Wood Stoves [All]	2007-2008	2008	2008-2014	2008-2014	NA	0.01	NA	0.02
2008 Total						2.9	4.01	2.9	5.7
2009 Total									
2010 Total									
Total SIP						2.9	4.01	2.9	5.7

NA: Not applicable, no SIP Reductions quantified in the 2007 AQMP.

RESOLUTION NO. 11-9

A Resolution of the South Coast Air Quality Management District Governing Board (AQMD) certifying the Addendum to Final Program Environmental Impact Report (PEIR) for the 2007 Air Quality Management Plan (AQMP) for a revision to the Final 2007 AQMP, to be referred to after adoption as the Revision to the Final 2007 AQMP.

A Resolution of the Governing Board of the AQMD adopting the Revision to the Final 2007 AQMP.

WHEREAS, the U.S. EPA promulgated 8-hour ozone and PM2.5 standards in 1997, followed up by implementation rules which set forth the classification and planning requirements for State Implementation Plans (SIP); and

WHEREAS, the federal Clean Air Act requires SIPs for regions not in attainment with the 8-hour ozone and fine particulate standards be submitted no later than 3-years after the standards became effective, whereby, SIPs for the South Coast Air Basin and Coachella Valley must have been submitted for 8-hour ozone and PM2.5 by June 15, 2007 and April 5, 2008, respectively; and

WHEREAS, the South Coast Air Quality Management District has jurisdiction over the South Coast Air Basin and the desert portion of Riverside County known as the Coachella Valley; and

WHEREAS, the South Coast Air Quality Management District is committed to comply with the requirements of the federal Clean Air Act; and

WHEREAS, the AQMD Governing Board finds and determines that the Revision to the Final 2007 AQMP, is considered a "project" pursuant to the California Environmental Quality Act (CEQA); and

WHEREAS, AQMD staff has reviewed the Revision to the Final 2007 AQMP and has concluded that the proposed project would result in no significant adverse environmental impacts; and

WHEREAS, AQMD staff has concluded that none of the modifications to the 2007 AQMP alter any of the conclusions reached in the Final PEIR for the 2007 AQMP and only minor technical changes or additions to the Final PEIR for the 2007 AQMP are necessary and none of the conditions in CEQA Guidelines §15162 apply so, an Addendum to the 2007 AQMP Final PEIR is the appropriate CEQA document (CEQA Guidelines §15164); and

WHEREAS, an Addendum to a previously certified EIR need not be circulated for public review and comment (CEQA Guidelines §15164(c), but is attached herein to the Final PEIR for the 2007 AQMP; and

WHEREAS, the Governing Board shall consider the Addendum with the Final PEIR for the 2007 AQMP prior to making a decision on the proposed project; and

WHEREAS, it is necessary that the adequacy of the Addendum to the Final PEIR for the 2007 AQMP be determined by the AQMD Governing Board prior to its certification; and

WHEREAS, the Governing Board prior to voting on the Proposed Revision to the Final 2007 AQMP, has reviewed and considered the Addendum with the Final PEIR for the 2007 AQMP; and

WHEREAS, the South Coast Air Quality Management District Governing Board, adopted the 2007 AQMP dated June 1, 2007 consisting of the document entitled 2007 AQMP as amended by the final changes set forth by the South Coast Air Quality Management District Governing Board and the associated documents listed in Attachment 1 to the Resolution from June 2007, the Final Socioeconomic Report for the 2007 AQMP; the Final Program EIR for the 2007 AQMP, and the Statements of Findings and Overriding Considerations and Mitigation Monitoring Plan; and

WHEREAS, the Resolution, the 2007 AQMP as amended by the final changes (including all documents listed in Attachment 1 to the Resolution from June 2007), the emissions budgets as incorporated in the 2007 AQMP, and the Final Program Environmental Impact Report on the 2007 AQMP was forwarded to and adopted by CARB, and the Board Resolution requested that the 2007 AQMP be forwarded to the U.S. EPA for approval as part of the State Implementation Plan which CARB subsequently did; and

WHEREAS, on November 22, 2010, U.S. EPA published its notice of proposed partial approval and partial disapproval of the 2007 Air Quality Management Plan (AQMP) PM2.5 Plan primarily because the attainment demonstration relies too heavily (i.e. greater than 10 percent) on emissions reductions from several State rules that have not been finalized or submitted to U.S. EPA for approval; and

WHEREAS, the 2011 revision to the 2007 PM2.5 and ozone SIP addresses the key elements of the proposed disapproval; and

WHEREAS, the 2011 revision to the 2007 PM2.5 and ozone SIP updates the implementation status of the AQMP control measures to meet the 2015 PM2.5 attainment; and

WHEREAS, the 2011 revision to the 2007 PM2.5 and ozone SIP retains the AQMD's proposal for contingency measures and also references and relies on CARB's proposed contingency measures; and

WHEREAS, the 2011 revision to the 2007 PM2.5 and ozone SIP re-initiates the request that U.S. EPA voluntarily accept reduction responsibility for 10 TPD NOx emissions in 2014 but will propose that AQMD and CARB jointly provide a "fair share" backstop emissions reduction proposal and includes the AQMD's commitment to obtain an additional 1 TPD NOx, if necessary; and

WHEREAS, the 2007 AQMP, as revised by the 2011 revision, includes every feasible measure and an expeditious adoption schedule; and

WHEREAS, significant emission reductions must be achieved from sources under state and federal jurisdiction for the South Coast Air Basin to attain the federal air quality standards; and

WHEREAS, said emission reduction programs have effectively improved air quality in the South Coast Air Basin for particulate matter less than 2.5 microns in diameter (PM2.5) and for 8-hr ozone; and

NOW, THEREFORE, BE IT RESOLVED, that the South Coast Air Quality Management District Governing Board hereby certifies that the Addendum to the Final Program Environmental Impact Report for the 2007 AQMP has been completed in compliance with the requirements of CEQA and finds that the Addendum to the Final Program Environmental Impact Report for the 2007 AQMP, is adequate and thereby approves it.

BE IT FURTHER RESOLVED, that because no significant adverse environmental impacts were identified as a result of implementing the Revisions to the 2007 PM2.5 and Ozone SIP, Findings, a Statement of Overriding Considerations, and a Mitigation Monitoring Plan are not required.

BE IT FURTHER RESOLVED, that the South Coast Air Quality Management District Governing Board hereby approves the 2011 Revisions to the 2007 PM2.5 and Ozone SIP.

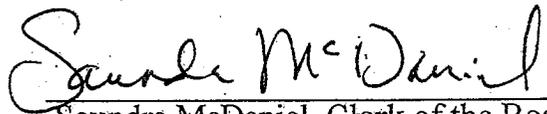
BE IT FURTHER RESOLVED, that the Executive Office is hereby directed to forward a copy of this Resolution, modified the 2011 Revision to the 2007 PM2.5 and Ozone SIP to CARB and to request that they be forwarded to the U.S. EPA for approval as part of the State Implementation Plan, and that U.S. EPA approve the 2007 PM2.5 and Ozone SIP as so modified.

AYES: Antonovich, Benoit, Burke, Cacciotti, Carney, Gonzales, Loveridge, Lyou, Mitchell, Perry, Pulido, and Yates.

NOES: None.

ABSENT: Nelson.

Dated: 3-4-2011


Saundra McDaniel, Clerk of the Board

APPENDIX G: Analysis of Environmental Impacts

ARB prepared an environmental analysis for the State Strategy for California's State Implementation Plan (SIP) for the New Federal PM2.5 and 8-Hour Ozone Standards prior to its approval by the Board in September 2007 (document available for review at <http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm> and at ARB's offices at 1001 I Street, Sacramento, California, Room 7-45). The State Strategy mapped out the actions ARB would take to reduce emissions to levels designed to bring California into compliance with federal air quality standards. Various measures identified in the 2007 State Strategy have been adopted by the Board since that time, and separate, additional environmental analyses were also prepared by ARB prior to the adoption of each of these measures. As part of tracking the implementation of the State Strategy, this progress report quantifies the emission reductions that have been achieved since adoption of the 2007 State Strategy. The proposed SIP revisions do not change the emissions levels of NOx, ROG, SOx, and direct PM2.5 that the Board committed to achieve by specific dates when it adopted the 2007 State Strategy.

The proposed SIP revisions include three components: (1) updates to ARB's rulemaking calendar, (2) updates to reasonable further progress (RFP) tables and associated reductions for contingency purposes, and (3) updates to the transportation conformity budgets. (See Appendix A for further descriptions of the revisions.) The proposed revisions do not cause any change that has the potential to result in a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment, for the following reasons.

The updates to the rulemaking calendar reflect the current status of measures that have already been adopted, and changes to the expected action dates for three measures that have not yet been adopted. For these measures, the updates to the rulemaking calendar do not change the measures or their expected implementation dates identified in the 2007 State Strategy. They merely change the dates by which ARB staff will bring these measures to the Board for proposed action by the Board.

The updates to the RFP tables and transportation conformity budgets are proposed accounting changes made to reflect the current status of adopted measures, better data, changes due to the recession, and methodological improvements to the emission inventory. These accounting changes do not change the strategies or commitments identified in the 2007 State Strategy to achieve specific emissions reductions by specified dates. Because no changes have been made to the strategies or the underlying emission reduction commitments in the 2007 State Strategy, there is no potential for any of the proposed SIP revisions to cause any significant adverse environmental impacts.