

Staff Report

CARB Review of the South Coast Air Basin Attainment Plan for the 2012 Annual PM_{2.5} Standard

Release Date: May 17, 2024

Hearing Date: June 27, 2024



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I. Executive Summary

This report presents the California Air Resources Board (CARB or Board) staff assessment of the South Coast Air Quality Management District (District) *South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard* (2024 South Coast PM2.5 Plan)¹. CARB staff has concluded that the 2024 South Coast PM2.5 Plan meets State Implementation Plan (SIP) requirements of the Clean Air Act (Act) for a serious PM2.5 nonattainment area including: 1) demonstration of attainment in 2030, 2) emission inventories, 3) Best Available Control Measure/Best Available Control Technology (BACM/BACT) demonstration, 4) Most Stringent Measures (MSM) demonstration, 5) reasonable further progress (RFP) demonstration, 6) Quantitative Milestones (QM), and 7) contingency measures. The 2024 South Coast PM2.5 Plan also includes a MSM demonstration as required by the Act for PM2.5 nonattainment areas requesting an attainment date extension. This report also includes CARB's aggregate emission reduction commitment for 2030 along with updated motor vehicle emissions budgets. The Board is scheduled to consider the 2024 South Coast PM2.5 Plan on June 27, 2024. If adopted, CARB will submit the 2024 South Coast PM2.5 Plan along with this report to the U.S. Environmental Protection Agency (U.S. EPA) as a revision to the California SIP.

The Act requires U.S. EPA to set national ambient air quality standards (standards) and periodically review the latest research on air pollution and health to ensure that standards remain protective of public health. In 1997, in addition to a 24-hour standard, U.S. EPA adopted a annual fine particulate matter (PM2.5) standard of 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)². In 2012, the annual PM2.5 standard was lowered to a more health-protective level of 12 $\mu\text{g}/\text{m}^3$ (12 $\mu\text{g}/\text{m}^3$ PM2.5 standard)³.

The Act establishes planning requirements for the areas that exceed the standards. These areas, known as nonattainment areas, must develop a SIP that demonstrates that they will attain the standard by specified dates and addresses other requirements. The District is the air pollution control agency responsible, along with CARB, for developing SIPs to meet standards for the South Coast Air Basin nonattainment area (South Coast). The District is also responsible for regulating stationary and areawide sources of air pollution in South Coast, while CARB is responsible for regulating most mobile sources. CARB and District controls in the 2024 South Coast PM2.5 Plan address directly-emitted PM2.5 (direct PM2.5) and the PM2.5 precursors, oxides of nitrogen (NOx) and ammonia since the District's modeling demonstrates that these precursors contribute significantly to annual PM2.5 levels.

The District has focused on reducing emissions of direct PM2.5 and the largest precursor, NOx, from the sources of these pollutants under their regulatory authority. The District has

¹ [2012 Annual PM2.5 Plan \(aqmd.gov\)](#)

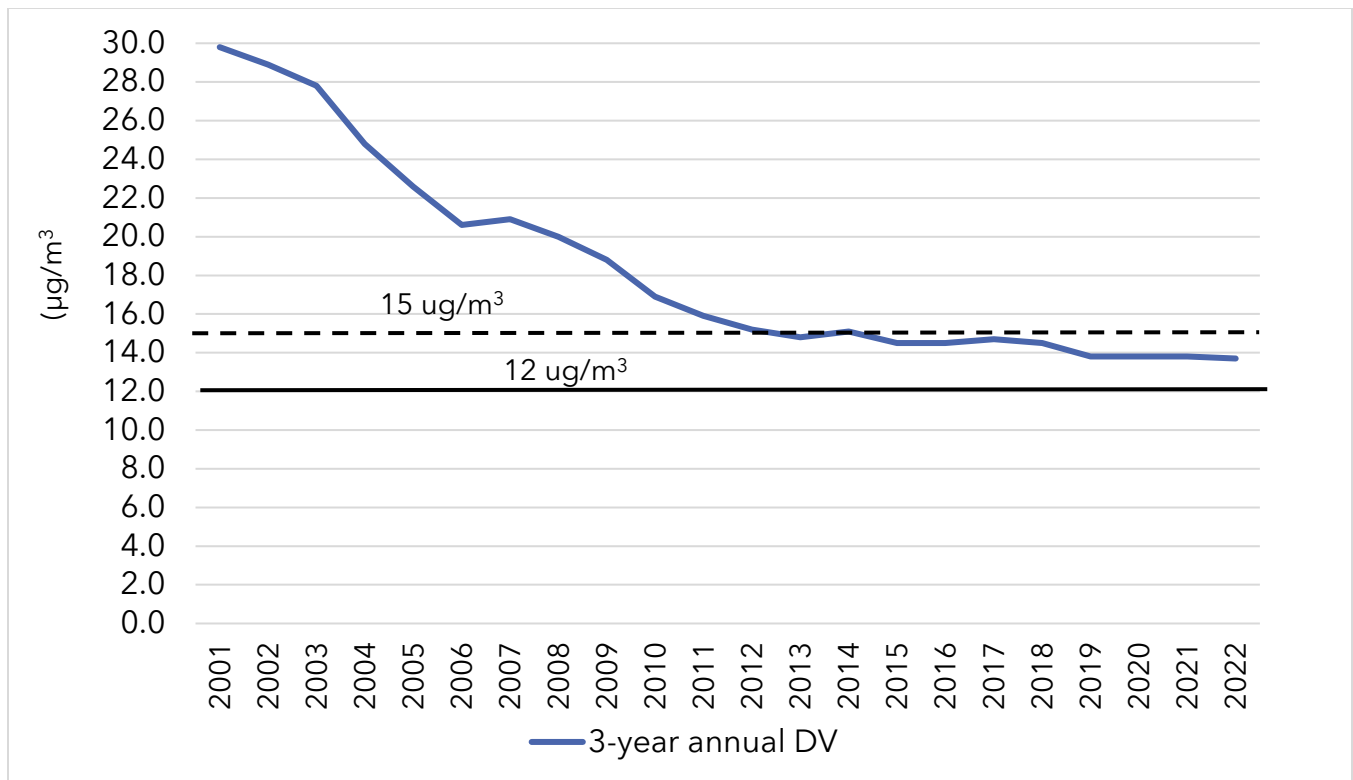
² [62 FR 38652](#)

³ [78 FR 3086](#)

achieved this by setting limits on emissions from large stationary sources such as power plants, refineries, and other industrial complexes, in addition to regulating area sources, such as paints, coatings, dry cleaners and gas stations. As a result of the District's actions NO_x, a main precursor for PM_{2.5} formation, has been reduced from the stationary sources that are primarily regulated by the District by almost 70% since 2000. Direct PM_{2.5} from District regulated stationary sources has also been reduced by 18% since 2000.

Concurrently, CARB has dramatically reduced NO_x emissions from sources under its authority. CARB's comprehensive strategy to reduce emissions from mobile sources consists of emission standards for new vehicles including zero-emission requirements, in-use programs to reduce emissions from existing vehicles and equipment fleets, the use of cleaner fuels, and incentive programs to accelerate market penetration of the cleanest vehicles beyond what is achieved by regulations alone. For on-road mobile sources primarily regulated by CARB, the NO_x emissions today in South Coast are almost 85% below emissions in 2000, even though the number of vehicles on the road has increased dramatically. In addition, direct PM_{2.5} emissions from those sources have been reduced by over 70% in that time. This has resulted in an over than 50% improvement in annual PM_{2.5} air quality since 2001, as shown in Figure 1.

Figure 1 - Annual Design Values in the South Coast



Beyond the reductions from these current programs, measures in the [2022 State Strategy for the State Implementation Plan](#) (2022 State SIP Strategy) will provide additional reductions in the South Coast in 2030. The 2022 State SIP Strategy was developed to support attainment of the 70 parts per billion (ppb) ozone standard across the State and in

the South Coast by 2037. These measures will also support attainment of the 12 µg/m³ PM2.5 standard in 2030. The 2024 South Coast PM2.5 Plan attainment demonstration incorporates emissions reductions from CARB measures in the 2022 State SIP Strategy, including those recently adopted as regulations by the Board and those still to be brought to the Board for consideration. This CARB Staff Report includes an aggregate emission reduction commitment for the emissions reductions from 2022 State SIP Strategy measures to be proposed for Board consideration of 9.1 tons per day (tpd) of NOx, 0.2 tpd of ammonia and 0.5 tpd of PM2.5 by 2030 (Table 1).

Table 1 - Proposed CARB Emissions Reductions Commitments

Emissions Reductions	2030 NOx	2030 Ammonia	2030 PM2.5
South Coast - Total Aggregate Emission Reductions	9.1 tpd	0.2 tpd	0.5 tpd

The measures from the 2022 State SIP Strategy will also reduce emissions in the many low-income and underserved communities that continue to experience disproportionately high levels of air pollution, while supporting other CARB planning efforts. The Board approved the 2022 State SIP Strategy and the commitments to pursue the measures included therein on September 22, 2022. When coupled with the emissions reductions from current programs, the reductions from measures in the 2022 State SIP Strategy and the 2024 South Coast PM2.5 Plan will provide for attainment of the 12 µg/m³ standard in the South Coast by the 2030 attainment year. CARB staff has concluded that the 2024 South Coast PM2.5 Plan, together with this CARB Staff Report, meets the requirements of the Act for the 12 µg/m³ PM2.5 standard. Thus, CARB staff recommends that the Board adopt the aggregate emissions reduction commitment and motor vehicle emissions budgets included in this CARB Staff Report, along with the 2024 South Coast PM2.5 Plan as a revision to the California SIP.

II. Background

In 1997, U.S. EPA promulgated the first PM_{2.5} standards based on studies showing that exposure to PM_{2.5} is associated with a variety of health problems, including ischemic heart disease, stroke, lung cancer, chronic obstructive pulmonary disease, and lower-respiratory infections such as pneumonia. These studies also showed that children, the elderly, and people with existing health problems had an increased risk of hospitalization for lung and heart-related illnesses and premature mortality.

Airborne PM_{2.5} is composed of primary PM_{2.5}, particles emitted directly into the air (such as soot and dust), and secondary PM_{2.5}, particles formed in the atmosphere from chemical reactions. U.S. EPA identifies four gaseous species as precursors to secondary PM_{2.5}: NO_x, SO_x, VOCs, and ammonia. Along with a 24-hour standard of 65 µg/m³, U.S. EPA set an annual PM_{2.5} standard at a concentration of 15 µg/m³ (15 µg/m³ PM_{2.5} standard) to protect public health. Effective April 5, 2005, the South Coast was designated as nonattainment for both of these standards. Effective August 24, 2016⁴, U.S. EPA determined that the South Coast attained the standards based on 2011-2013 air quality data.

On December 14, 2012, U.S. EPA strengthened the annual PM_{2.5} standard from 15.0 µg/m³ to 12.0 µg/m³⁵. On April 15, 2015, the South Coast was designated nonattainment for the 12 µg/m³ PM_{2.5} standard with a classification of moderate.

In 2017, the District adopted the 2016 AQMP, which addressed all applicable requirements including a demonstration that attainment by the moderate area deadline was impracticable and thus requested reclassification of the South Coast as a serious nonattainment area with an attainment deadline of December 31, 2025. The 2016 AQMP included an attainment demonstration of the 12 µg/m³ PM_{2.5} standard by the serious deadline. CARB submitted the 2016 AQMP to U.S. EPA on April 27, 2017.

In the years following CARB's submittal of the 2016 AQMP, air quality data from a near-road monitor showed high annual PM_{2.5} levels. Data from this monitor was not available at the time the 2016 AQMP was developed since the monitor did not have the 3 years of valid readings necessary to be used as a regulatory monitor. However, by the time U.S. EPA was reviewing the South Coast attainment demonstration for the 12 µg/m³ PM_{2.5} standard, the near-road data was available and lead to U.S. EPA questioning whether the attainment demonstration could account for the near-road data and still show attainment in 2025 in the South Coast.

On November 9, 2020, U.S. EPA approved the moderate area SIP elements of the 2016 AQMP and approved the classification of South Coast to serious, establishing a new due date for serious area plan elements for the 12 µg/m³ PM_{2.5} standard⁶. After many

⁴ [81 FR 48350](#)

⁵ [78 FR 3086](#)

⁶ [85 FR 71264](#)

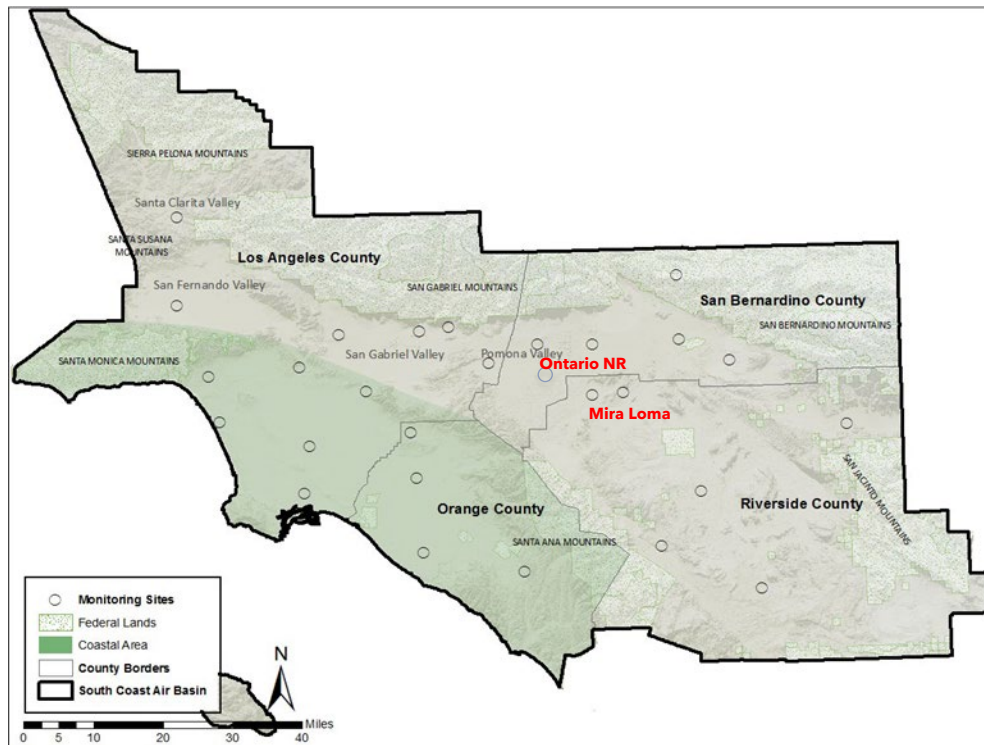
discussions about the serious area plan elements submitted years prior as a part of the 2016 AQMP, U.S. EPA requested that the State submit a supplemental demonstration showing attainment by the serious deadline at the near-road monitors. In response to U.S. EPA's request, CARB and the District concluded that demonstrating attainment at the near-road monitors required the development of a new SIP and a comprehensive control strategy to provide the emissions reductions needed for attainment. Since the serious SIP due date had not passed, CARB and the District withdrew the serious elements of the 2016 AQMP from U.S. EPA consideration in the California SIP.

To demonstrate attainment and submit updated elements to meet the other serious area requirements of the Act, the District developed the 2024 South Coast PM2.5 Plan. The 2024 South Coast PM2.5 Plan demonstrates that attainment of the 12 $\mu\text{g}/\text{m}^3$ PM2.5 standard in 2025 is infeasible and thus demonstrates attainment by December 31, 2030, the extended serious area deadline allowed by the Act. As is required to request an extension of the serious area deadline, the 2024 South Coast PM2.5 Plan also includes a demonstration that the area is implementing MSM for all sources and they have met their prior commitments for this standard.

III. Nature of the PM2.5 Problem in the South Coast

The South Coast includes the southern two-thirds of Los Angeles County, Orange County, and the urbanized, western portions of Riverside and San Bernardino Counties. The area generally forms a lowland plain, bounded by the Pacific Ocean on the west and by mountains on the other three sides (Figure 2).

Figure 2 - Map of the South Coast*



*Monitors in red indicate highest annual PM2.5

The South Coast is the nation’s second largest urban area and California’s largest metropolitan region. It is home to over 17 million people, accounting for 40% of the State’s population and over 11 million passenger vehicles that, together with the commercial vehicles on the roads, travel over 395 million miles a day, or close to 145 billion miles per year⁷.

Emissions from these vehicles along with those from ships, ports, trains, railyards, and airports, in addition to emissions from stationary sources such as refineries and area sources such as cooking and residential fuel combustion, all contribute to significant PM2.5 pollution in the South Coast. In addition to the amount of emissions, other factors also contribute to the South Coast PM2.5 air quality problem. These factors include periods of stagnant air

⁷ 87 FR 7774

movement and a topology that traps air pollution blown inland against large mountains in the eastern portions of the South Coast.

Although significant progress has been made lowering annual PM2.5 levels over the last 20 years from approximately 30 $\mu\text{g}/\text{m}^3$ in 2001 to less than 14 $\mu\text{g}/\text{m}^3$ in 2022, annual PM2.5 levels have remained flat in the last few years. Figure 1 illustrates progress in reducing the annual PM2.5 design value, used to measure PM2.5 air quality, in the South Coast. Design values are based on monitored air quality data. They are calculated from the 3-year average of PM2.5 annual mean mass concentrations at each eligible monitoring site. The highest value of all monitoring sites in the nonattainment area represents the area's regulatory design value for a given year.

IV. Clean Air Act SIP Requirements

The Act requires that nonattainment areas develop SIP revisions that include components necessary to understand the nature of the air pollution problem, develop a strategy to solve the problem, and track progress toward meeting the standard.

In its classification of the South Coast as a serious nonattainment area for the 12 µg/m³ PM_{2.5} standard⁸, U.S. EPA listed the elements that needed to be revised in the SIP to satisfy the requirements of section 189(d) of the Act, which are:

1. An Emissions Inventory of all sources of direct PM_{2.5} and PM_{2.5} precursors (section 172(c)(3));
2. A demonstration (including air quality modeling) that the plan provides for attainment (sections 189(b)(1)(A), 188(c)(2), and 188(e)), by either:
 - a. The serious attainment deadline of December 31, 2025, or
 - b. If seeking an extension of the attainment date, no later than December 31, 2030;
3. A demonstration that Best Available Control Measures, including Best Available Control Technology shall be implemented (section 189(b)(1)(B));
4. An RFP demonstration (section 172(c)(2));
5. Quantitative milestones to be achieved in the milestone years and attainment year (section section189(c));
6. Provisions that control requirements for major stationary sources of PM_{2.5} also apply to PM_{2.5} precursors, except where the sources do not contribute significantly to PM_{2.5} levels that exceed the standard (section 189(e));
7. Contingency measures to be implemented if the area fails to meet RFP or to attain by the applicable attainment date (section 172(c)(9)); and
8. A demonstration of an applicable Nonattainment New Source Review program (sections 189(b)(3)) and 189(e)); and
9. Transportation conformity budgets for milestone years and attainment year (section 176).

In addition, section 188(e) of the Act requires that areas requesting an extension of the attainment deadline must include additional elements in the SIP revision. The revision must include demonstrations that attainment by the serious deadline is impracticable, that the area is implementing MSM, and that all requirements and commitments in the applicable SIP have been met.

Further, 176(c) of the Act specifies that federal agencies may not approve or fund transportation plans and projects unless they are consistent with the regional SIP. Conformity with the SIP requires that transportation activities do not (1) cause or contribute to new air quality violations, (2) increase the frequency or severity of any existing violation, or (3) delay the timely attainment of NAAQS. Therefore, quantifying on-road motor vehicle

⁸ 85 FR 71267

emissions and comparing those emissions with a budget established in the SIP determine transportation conformity between air quality and transportation planning. The motor vehicle emissions budgets (MVEB) are set for each criteria pollutant or its precursors for each milestone year and the attainment year of the SIP. Subsequent transportation plans and programs produced by transportation planning agencies must demonstrate that the emissions from the proposed plan, program, or project do not exceed the MVEBs established in the applicable SIP.

Based on CARB staff review, the 2024 South Coast PM2.5 Plan, together with the CARB Staff Report, meets all requirements of the Act as demonstrated below.

V. Emissions Inventory

An emissions inventory is a systematic listing of the sources of air pollutants along with the amount of pollutants emitted from each source or category. It is a critical tool used to evaluate, control, and mitigate air pollution. SIPs are required to include emissions inventories as a basis for modeling to demonstrate attainment, and also track emissions reductions for RFP.

Nonattainment areas are required to develop emissions inventories for multiple years. A base year emissions inventory and an attainment year emissions inventory is required for inputs into a modeled attainment demonstration. The 2024 South Coast PM2.5 Plan uses 2018 as the base year inventory with inventories for future years forecast from it. To demonstrate RFP, inventories for periodic future milestone years are also developed.

A baseline emissions inventory represents the emissions in a year with current controls in place and is calculated from monitored source emissions, predicted activity, and adopted regulations that reduce emissions from the source. Future emissions inventories in the milestone years are grown from the base year and adjusted to account for expected growth and for current regulatory programs. To demonstrate attainment, a future inventory in the attainment year is also required. This attainment inventory (projected inventory) accounts for additional reductions from new measures included in the attainment demonstration.

The inventories in a PM2.5 SIP must include emissions of direct PM2.5 in addition to the PM2.5 precursor emissions unless the District can demonstrate that any precursors are not significantly contributing to atmospheric PM2.5⁹. As mentioned above, atmospheric PM2.5 is made up of direct PM2.5, in addition to secondary PM2.5 created from the precursors, NO_x, ammonia, ROG, and SO_x. The PM2.5 SIP Requirements Rule¹⁰ (PM2.5 Rule) includes a means to exclude certain precursors from an attainment demonstration and related attainment inventories if it can be shown that the emissions of a precursor within the nonattainment area do not contribute significantly to PM2.5 levels and the exceedance of the standard. Appendix VI of the 2024 South Coast PM2.5 Plan provides such a demonstration that SO_x and ROG do not contribute to PM2.5 in the South Coast. As such, these are not included in the projected emission inventory, but must still be included in the base year emissions inventory. Table 2 provides a summary of the 2018 base year emissions inventories for PM2.5 and all precursors.

In order to determine how emissions from different categories are generally changing over time, the emissions inventories are divided into major source categories: stationary and

⁹ *81 FR 58009*, see also U.S. EPA, https://www.epa.gov/sites/default/files/2019-05/documents/transmittal_memo_and_pm25_precursor_demo_guidance_5_30_19.pdf

area-wide, on-road motor vehicles and off-road vehicles and equipment. Table 2 shows the emissions by category in the 2018 base year.

Table 2 - Baseline Emission Inventories by Category in the South Coast
(tpd, annual average, out to 100 nautical miles)

2018 Emissions	PM2.5	NOx	Ammonia	ROG	SOx
Stationary and Area-wide	45.23	59.94	58.03	219.36	8.83
On-Road Motor Vehicles	5.60	186.03	16.36	93.42	1.77
Off-Road Vehicles and Equipment	5.22	137.05	0.15	89.15	3.81
Total Emissions	56.04	383.03	74.54	401.93	14.40

The stationary and area-wide emissions in Table 2 reflect emissions reductions from the implementation of District rules submitted through October 2020, as well as District Rule 1109.1 adopted in November of 2021. The on-road mobile source inventories in the 2024 South Coast PM2.5 Plan were developed using the latest CARB on-road model, EMFAC2021, which includes recent CARB regulations such as the Clean Truck Check Program and Small Off-Road Engines (SORE) regulations adopted in 2021. Details on the emissions inventories used in the 2024 South Coast PM2.5 Plan can be found in Chapter 3 and Appendix I of the 2024 South Coast PM2.5 Plan.

When the baseline inventory is developed, by necessity, it includes a “cut-off” date for adopted regulations. Emission reductions from regulations adopted after the cut-off date are listed in the emissions inventories as “line item adjustments” (see Appendix I of the 2024 South Coast PM2.5 Plan). The projected emissions inventory represents the emissions after reductions are applied from all control measures including line item adjustments for recently adopted regulations and remaining control measures, as shown in Table 3.

As described previously, SOx and ROG do not contribute significantly to PM2.5 in the South Coast, and thus these are not included in the projected emission inventory in Table 3.

Table 3 - Attainment Emission Inventories in the South Coast

(tpd, annual average, out to 100 nautical miles)

	Pollutant	2018	2025	2028	2030	2031
Baseline Emissions	NOx	383.02	239.4	219.29	210.31	207.17
Baseline Emissions	PM2.5	56.04	54.01	54.11	54.05	54.06
Baseline Emissions	NH3	74.54	77.79	78.91	79.31	79.48
Line Item Adjustments	NOx	-	3.26	10.06	24.24	24.24
Line Item Adjustments	PM2.5	-	0.14	0.47	0.83	0.83
Line Item Adjustments	NH3	-	0.1	1.4	2.96	2.96
Control Measure Reductions	NOx	-	0	0	10.57	10.57
Control Measure Reductions	PM2.5	-	0	0	0.54	0.54
Control Measure Reductions	NH3	-	0	0	0.24	0.24
Projected Emissions	NOx	-	236.14	209.23	175.5	172.36
Projected Emissions	PM2.5	-	53.87	53.64	52.68	52.69
Projected Emissions	NH3	-	77.69	77.51	76.11	76.28

VI. Attainment Demonstration

To demonstrate attainment of a standard, the Act requires SIPs to identify both the magnitude of reductions and the actions necessary to achieve those reductions. To meet these requirements, the District has prepared an attainment demonstration that provides for the most expeditious attainment possible of the 12 µg/m³ PM_{2.5} standard.

The attainment demonstration includes the benefits of CARB and District current control programs, of which continued implementation provides new emission reductions each year. The attainment demonstration also includes aggregate emissions reductions from new measures included in the 2024 South Coast PM_{2.5} Plan and measures included in the 2022 State SIP Strategy adopted by the Board in September 2022. As required by the Act, the modeled attainment demonstration in the 2024 South Coast PM Plan uses photochemical modeling to demonstrate attainment of the 12 µg/m³ PM_{2.5} standard in 2030. The control strategy and modeled attainment demonstration are summarized in the following pages.

VII. Control Strategy

The control strategy in a SIP describes the measures and actions that provide the emissions reductions needed to attain the standard. As described previously, the emissions that result in atmospheric PM_{2.5} are direct PM_{2.5}, and the precursors NO_x, ammonia, SO_x, and ROG. Of the precursors, the District has determined that SO_x and ROG do not contribute to PM_{2.5} in the South Coast, and therefore controls for those precursors would have no effect on monitored PM_{2.5} levels, see Appendix VI of the 2024 South Coast PM_{2.5} Plan. The level of reductions determined by the modeled attainment demonstration is provided in Table 4.

Table 4 - Total Reductions Needed For Attainment

(tpd, annual average, out to 100 nautical miles)

Pollutant	2018 Base Year Emissions	2030 Attainment Scenario Emissions	Total Reductions Needed
NO_x	383.02	175.37	207.65
PM_{2.5}	56.04	52.68	3.36
NH₃	74.54	76.11	-1.57*

*Modeling shows that a minor increase in ammonia does not interfere with attainment

The control strategy in the 2024 South Coast PM_{2.5} Plan builds on current CARB and District controls on mobile, stationary, and area sources. The control programs developed for previous ozone and PM_{2.5} SIPs will provide the bulk of the reductions needed for attainment in 2030. However, as described in Chapter 4 of the 2024 South Coast PM_{2.5} Plan, to demonstrate attainment in 2030, new controls on direct PM_{2.5}, in addition to NO_x and ammonia, will be needed. These new control measures account for 5% of the NO_x emissions reductions and 16% of the direct PM_{2.5} emissions reductions needed for attainment.

A. CARB Control Program

Given the severity of California's air quality challenges, CARB has implemented the most stringent mobile source emissions control program in the nation. CARB's comprehensive strategy to reduce emissions from mobile sources consists of emissions standards for new vehicles, in-use programs to reduce emissions from existing vehicle and equipment fleets, cleaner fuels, and incentive programs to accelerate the penetration of the cleanest vehicles beyond that achieved by regulations alone.

Overview of CARB Commitment

SIPs may contain enforceable commitments to achieve the level of emissions necessary to meet federal air quality standards, as defined by the attainment demonstration. CARB's 2022 State SIP Strategy lists new SIP measures for which potential emissions reduction SIP commitments for the South Coast in 2030 are now estimated based on the measures identified and quantified to date. The control measure schedule in CARB's adopted 2022 State SIP Strategy (adopted September 22, 2022) formed the basis of the commitments for emission reductions by the 2030 attainment deadline for South Coast that will be proposed for CARB Board consideration alongside the 2024 South Coast PM2.5 SIP. The commitments consist of two components:

1. A commitment to bring an item to the CARB Board for defined new measures or take other specified actions within CARB's authority; and
2. A commitment to achieve aggregate emission reductions by specific dates.

As part of each SIP needing emission reductions from the State, the total aggregate emission reductions, and the obligation to take certain proposals to the CARB Board or take other actions within CARB's authority specified in the 2022 State SIP Strategy would become enforceable upon approval by U.S. EPA. While the 2022 State SIP Strategy discusses a range of measures and actions, those measures and actions are still subject to CARB's formal approval process and would not be final until the CARB Board takes action.

Commitment to Act on Measures

For each of the SIP measures shown in Table 5, CARB committed in the 2022 State SIP Strategy to address each measure as described. For each measure committed to, CARB staff would undertake the actions detailed for each measure. In the instance of measures that involve the development of a rule under CARB's regulatory authority, CARB committed to bring a publicly noticed item before the CARB Board that is either a proposed rule, or is a recommendation that the CARB Board direct staff to not pursue a rule covering that subject matter at that time. This recommendation would be based on an explanation of why such a rule is unlikely to achieve the relevant emission reductions in the relevant timeframe, and would include a demonstration that the overall aggregate commitment will be achieved despite that rule not being pursued. This public process and CARB hearing would provide additional opportunity for public and stakeholder input, as well as ongoing technology review, and assessments of costs and environmental impacts.

The measures, as proposed by staff to the CARB Board or adopted by the CARB Board, may provide more or less than the initial emission reduction estimates. In addition, action by the CARB Board may include any action within its discretion.

Table 5 - 2022 State SIP Strategy Measures and Schedule

Measure	Agency	Action	Implementation Begins
On-Road Heavy-Duty			
Advanced Clean Fleets Regulation	CARB	2023	2024
Zero-Emissions Trucks Measure	CARB	2028	2030
On-Road Light-Duty			
Clean Miles Standard	CARB	2021	2023
Off-Road Equipment			
Tier 5 Off-Road Vehicles and Equipment	CARB	2025	2029
Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation	CARB	2022	2024
Transport Refrigeration Unit Regulation Part 2	CARB	2026	2028
Commercial Harbor Craft Amendments	CARB	2022	2023
Cargo Handling Equipment Amendments	CARB	2027	2030
Other			
Zero-Emission Standard for Space and Water Heaters	CARB	2025	2030
Primarily-Federally and Internationally Regulated Sources - CARB Measures			
In-Use Locomotive Regulation	CARB	2023	2024

Commitment to Achieve Emission Reductions

The following section describes the estimated emission reduction and potential commitment from the SIP measures identified and quantified to date for the South Coast. The aggregate commitment of emissions reductions from State sources to be proposed for CARB Board consideration is summarized below.

While CARB includes estimates of the emission reductions in 2030 from each of the individual new measures, CARB’s overall commitment is to achieve the total emission reductions necessary from State-regulated sources to attain the federal air quality standards, reflecting the combined reductions from the existing control strategy and new measures. Therefore, if a particular measure does not get its expected emission reductions, the State’s overall commitment to achieving the total aggregate emission reductions still exists. If actual emission decreases occur that exceed the projections reflected in the current emission inventory, CARB will submit an updated emissions inventory to U.S. EPA as part of a SIP revision. The SIP revision would outline the changes that have occurred and provide appropriate tracking to demonstrate that aggregate emission reductions sufficient for attainment are being achieved through enforceable emission reduction measures. CARB’s emission reduction commitments may be achieved through a combination of actions including but not limited to the implementation of control measures; the expenditure of local, State, or federal incentive funds; or through other enforceable measures.

B. Emissions Reductions

CARB’s control programs, including the measures in the 2022 State SIP Strategy, provide emission reduction benefits throughout the State. Although the existing control program will provide mobile source emission reductions necessary to meet the attainment needs of many areas of the State, the new measures in the 2022 State SIP Strategy are needed to provide further reductions to achieve the 12 µg/m³ PM2.5 standard in the South Coast and enhance statewide air quality progress towards the 9 µg/m³ annual PM2.5 standard promulgated in 2024.

Emission Reductions from Current Programs

Table 6 provides the mobile source emissions under CARB and District current programs for the South Coast. Ongoing implementation of current control programs is projected to reduce mobile source emissions of direct PM2.5 and NOx by 3.4 tpd and 160.7 tpd, respectively, in the South Coast in 2030 compared to 2018 levels. Although the current mobile source baseline shows an increase in ammonia emissions in 2030 compared to 2018 levels, this baseline does not reflect emissions reductions from a number of recently adopted CARB regulations identified in Table 9. When taking these reductions into account, ammonia emissions are projected to increase by 1.8 tpd in 2030 compared to 2018 levels. Achieving the benefits projected from the current control program will continue to require significant efforts for implementation and enforcement and thus represents an important element of the overall strategy.

Table 6 - South Coast Baseline Mobile Source Emissions¹¹

Pollutant	2018 Emissions (tpd)	2030 Emissions (tpd)	Change
PM2.5	10.8	7.4	-31%
NOx	323.3	162.6	-50%
NH3	16.5	21.3	29%

Although most of the 2016 State SIP Strategy measure commitments have been adopted, there remains the Zero-Emission Forklift measure which will be acted upon by the CARB Board in 2024. Table 7 below shows the timeline and anticipated emission reductions for this measure.

¹¹ Source: MSC_NAA_CEPAM_v101B; does not reflect emissions reductions from recently-adopted CARB regulations identified in Table 5

Table 7 - South Coast Reductions from Remaining 2016 State SIP Strategy Measure

Measure	Action	Implementation Begins	2030 NOx (tpd)	2030 PM2.5 (tpd)	2030 NH3 (tpd)
Zero-Emission Forklift	2024	2026	0.8	<0.1	NYQ

Emission Reductions from 2022 State SIP Strategy Measures

In addition to controlling direct PM2.5, air quality modeling has determined that NOx and ammonia are significant precursors for the 12 µg/m³ PM2.5 standard in the South Coast, and that ammonium nitrate contributes 20 to 35 percent of total PM2.5 in the region, varying by season and location. Further, modeling indicates that total NOx emissions from all sources in the South Coast will need to decrease by approximately 55 percent from 2018 levels in order to attain the 12 µg/m³ PM2.5 standard in 2030. A significant fraction of the needed reductions will come from the existing control program already in the baseline emission inventory. In addition, as described above, one measure commitment included in the 2016 State SIP Strategy has not yet been acted upon, and a number of measure commitments included in both the 2016 and 2022 State SIP Strategies were very recently adopted and are thus not yet in the baseline emissions inventory, as outlined in Table 9 below.

The measures contained in the 2022 State SIP Strategy commitment reflect a variety of State actions across on-road and off-road vehicle and appliance sectors. Collectively, emissions reductions from CARB’s current control program, reductions from the 2016 and 2022 State SIP Strategy measures adopted but not yet in the baseline, reductions from the remaining 2016 State SIP Strategy measure, and reductions estimated from the future measures identified in the 2022 State SIP Strategy and quantified below will provide the reductions needed from State sources to support attainment of the 12 µg/m³ PM2.5 standard in the South Coast. Table 8, Table 9, and Table 10 summarize the reductions from the identified and quantified measures. In Table 8, the reductions estimated from the remaining 2016 State SIP Strategy measure and future measures identified in the 2022 State SIP Strategy are described as the “Proposed CARB aggregate emissions reductions commitment” until the Board adopts the aggregate emissions reductions commitment for the year 2030.

Table 8 - 2030 South Coast Emissions Reductions from CARB Programs¹²

CARB Programs in South Coast	NOx (tpd)	PM2.5 (tpd)	NH3 (tpd)
Current Control Program ¹³	172.8	1.9	-4.7 ¹⁴
2016 and 2022 State SIP Strategy Measures Adopted (Not yet in baseline inventory)	20.5	0.8	2.9
Proposed CARB Aggregate Emissions Reductions Commitment	9.1	0.5	0.2
2016 State SIP Strategy Measure Remaining	0.8	<0.1	NYQ
2022 State SIP Strategy Measures Remaining	8.2	0.5	0.2
Total Reductions	202.4	3.2	-1.4

Table 9 reflects the 2016 and 2022 State SIP Strategy measure commitments that the CARB Board has recently adopted. The associated emissions reductions from these recently adopted measures are not yet all accounted for in the baseline emissions inventory. Nonetheless, CARB measure commitments are achieving emissions reductions and will contribute towards attainment of the 12 µg/m³ PM2.5 standard in South Coast in 2030.

¹² Numbers may not add up due to rounding.

¹³ Current Control Program represents the current baseline emissions out to 100 nautical miles with adopted CARB and district measures excluding those recently-adopted CARB regulations identified in Table 5 (Source: MSC_NAA_CEPAM_v101B)

¹⁴ Negative number indicates growth in emissions

Table 9 - South Coast Expected Emissions Reductions from 2016 and 2022 State SIP Strategy Recently Adopted Measures

2016 and 2022 State SIP Strategy Measures	2030 NOx (tpd)	2030 PM2.5 (tpd)	2030 NH3 (tpd)
On-Road Heavy-Duty			
Advanced Clean Fleets Regulation	4.7	<0.1	0.8
Total On-Road Heavy-Duty Reductions	4.7	<0.1	0.8
On-Road Light Duty			
Advanced Clean Cars II	1.4	0.1	2.1
Clean Miles Standard	<0.1	<0.1	<0.1
Total On-Road Light-Duty Reductions	1.5	0.1	2.1
Off-Road Equipment			
Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation	1.9	0.1	NYQ
Commercial Harbor Craft Amendments	2.0	<0.1	NYQ
Transport Refrigeration Unit Part I	0.3	<0.1	NYQ
Total Off-Road Equipment Reductions	4.3	0.3	NYQ
Primarily-Federally and Internationally Regulated Sources - CARB Measures			
In-Use Locomotive Regulation	9.9	0.2	NYQ
Total Primarily-Federally and Internationally Regulated Sources - CARB Measures Reductions	9.9	0.2	NYQ
Emissions Reductions	20.5	0.8	2.9

Table 10 - South Coast Expected Emissions Reductions from the Remaining 2022 State SIP Strategy Measures¹⁵

2022 State SIP Strategy Measures	2030 NOx (tpd)	2030 PM2.5 (tpd)	2030 NH3 (tpd)
On-Road Heavy-Duty			
Zero-Emissions Trucks Measure	2.9	<0.1	0.2
Total On-Road Heavy-Duty Reductions	2.9	<0.1	0.2
Off-Road Equipment			
Tier 5 Off-Road Vehicles and Equipment	0.2	<0.1	NYQ
Transport Refrigeration Unit Regulation Part 2	1.7	<0.1	NYQ
Cargo Handling Equipment Amendments	0.7	<0.1	NYQ
Total Off-Road Equipment Reductions	2.7	<0.1	
Other			
Zero-Emission Standard for Space and Water Heaters ¹⁶	2.5	0.4	<0.1
Total Other Reductions	2.5	0.4	<0.1
Emissions Reductions	8.2	0.5	0.2

Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 (Title VI) provides that no person in the United States shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. As a recipient of federal funds, CARB must ensure it complies with Title VI and U.S. EPA’s Title VI implementation regulations in its relevant programs and policies. In developing the 2022 State SIP Strategy’s robust suite of control measures, CARB staff engaged in a thorough public process that addresses the requirements of Title VI. CARB will continue to address the requirements of Title VI in implementation of the 2022 State SIP Strategy and related Clean Air Act implementation activities. Written guidance from U.S. EPA is needed to provide additional detail on Title VI requirements and expectations and support for effective implementation efforts.

Many low-income and disadvantaged communities in nonattainment areas, and across the State, continue to experience disproportionately high levels of air pollution and the resulting detrimental impacts to their health. Research shows large disparities in exposure to pollution between disadvantaged communities and other communities. There are disparities between white and non-white populations in California, with Black and Latino populations experiencing significantly greater air pollution impacts than white populations. Mobile source pollution exposures show some of the highest disparities. Mobile sources are

¹⁵ Numbers may not add up due to rounding.

¹⁶ Reductions may be achieved through CARB and/or complementary South Coast AQMD control measures for this sector.

the largest sources of pollution exposure disparity for Black populations and disadvantaged community residents, when compared to the average population in California. Specifically, mobile sources accounted for 45% of exposure disparity for the Black population, and 37% of exposure disparity for people in disadvantaged communities. While significant progress has been made in reducing mobile and stationary source pollution in California through regulatory and other program activities, disparities in the location of pollution and cumulative exposures continue.

In 2023, CARB adopted the following Vision for Racial Equity to guide our external work, including the implementation of the Community Air Protection Program: CARB commits to just social change by working at all levels within the organization and externally to address environmental injustices and advance racial equity in the achievement of its mission. CARB works toward a future where all Californians breathe healthy and clean air, benefit from actions to address climate change, and where race is no longer a predictor of life outcomes. In working to realize this vision, CARB prioritizes environmental justice, uses tools to operationalize racial equity, and conducts meaningful community engagement in its policy and planning efforts and programs to address the longstanding environmental and health inequities from elevated levels of toxic air contaminants, criteria pollutants, and secondary impacts of climate change. It is imperative to optimize California's control programs to maximize emissions reductions and provide targeted near-term benefits in those communities that continue to bear the brunt of poor air quality. Specific efforts include a commitment to apply a racial equity lens in considering benefits and burdens of CARB's programs and policies, including regulatory actions. A racial equity lens is a set of questions to estimate impacts and benefits on the basis of race, ethnicity or other relevant categories, and considering alternatives.

Using a racial equity lens also requires a commitment to meaningful community engagement. In support of this commitment, CARB recently contracted with a number of community experts to vet and refine a model framework for community engagement. As noted above, while significant progress has been made to address air pollution statewide and in local communities, ensuring all Californians have access to healthy air quality is imperative.

In addition to these important efforts, the 2022 State SIP Strategy measures such as the Advanced Clean Fleets and In-Use Locomotive Regulations will reduce mobile source emissions from heavy-duty trucks and other sources around warehouses, railyards, and ports, as well as reducing other emissions, which in turn will reduce corresponding health risk in California's most impacted communities.

CARB prioritized public participation as an essential part of developing the measures included in the 2022 State SIP Strategy. CARB initiated the public process with a workshop in July 2021. After the workshop, CARB staff reached out to and met with a number of community-based organizations who provided input on the potential control measures. CARB released the 2022 State SIP Strategy: Draft Measures document which considered the input from the community-based organizations and comments during the first workshop.

CARB staff held a second workshop discussing the Draft Measures document in October 2021 and received additional input from a broad array of interested parties. The workshop presented a detailed discussion on the potential measures and allowed for the public and interested parties to comment on every facet of each potential measure. CARB staff also participated in the South Coast measure workshops as part of their SIP development process. CARB staff released the Draft 2022 State SIP Strategy in January 2022, prior to a third workshop, and presented an informational update to the Board at the Board Meeting in February 2022 to discuss and obtain public feedback. The input from numerous interested parties and community-based organizations framed the control measures in the Strategy such as the Zero-Emissions Trucks and Pesticide Measures.

These workshops and Board updates provided forums in both English and Spanish and afforded any special accommodations if requested to facilitate discussing the proposed measures in a public setting and to provide additional opportunity for public feedback, input, and ideas. And finally, CARB released the Proposed 2022 State SIP Strategy and hosted our 4th workshop in August 2022, prior to the CARB Board adopting the 2022 State SIP Strategy in September 2022. The workshops were well attended by a wide range of interested parties including community-based organizations. CARB staff listened to interested parties, evaluated their recommendations, and included some of these recommendations as measures that were appropriate for the 2022 State SIP Strategy. In order for a public suggestion to be included as a SIP measure, it needed to meet U.S. EPA -required integrity elements. SIP measures are required to be quantifiable, enforceable, surplus, and permanent. Measures suggested by the public that were ultimately adopted in the 2022 State SIP Strategy include a regulation to reduce emissions of reactive organic gas from pesticides in collaboration with the California Department of Pesticide Regulation and a zero-emission truck measure to help ensure that smaller trucking companies have more consistent access to zero-emission truck incentives.

Following the Board's approval of the 2022 State SIP Strategy, the public processes continue as each measure within the Strategy goes through its own public process to engage with impacted communities and interested parties to further develop the measures prior to being brought to the Board for consideration as a regulation or other program. As development and implementation of these measures progress, CARB staff will continue to identify and implement opportunities to mitigate air pollution associated with racial inequities and meaningfully engage and partner with communities most impacted to address long standing disparities and challenges. As CARB cannot do this alone, CARB will also continue to partner with other authorities such as air districts including the South Coast AQMD, other State agencies, and the federal government to ensure emissions reduction are achieved.

These connected efforts, as well as interagency efforts, will provide additional pathways to address Title VI requirements and support achieving the goal where ZIP Code or race does not predict air pollution exposures. CARB has reviewed U.S. EPA and U.S. Department of Justice resources for Title VI and environmental justice policies, and looks forward to written

guidance from U.S. EPA to address Clean Air Act section 110(a)(2)(E) as the State develops future clean air plans.

Civil Rights Policy and Discrimination Complaint Process

Under CARB's written Civil Rights Policy and Discrimination Complaint process (Civil Rights Policy), CARB has a policy of nondiscrimination in its programs and activities and implements a process for discrimination complaints filed with CARB, which is available on CARB's website. The Civil Rights Officer coordinates implementation of CARB's nondiscrimination activities, including as the Equal Employment Opportunity (EEO) Officer for employment purposes, and who can be reached at *EEOP@arb.ca.gov*, or (279) 208-7110.¹⁷

The Civil Rights Policy and Discrimination Complaint Process provides the following information about the nondiscrimination policy and its applicability:

It is CARB policy to provide fair and equal access to the benefits of a program or activity administered by CARB. CARB will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by CARB. Members of the public who believe they were unlawfully denied full and equal access to a CARB program or activity may file a civil rights complaint with CARB under this policy. This non-discrimination policy also applies to people or entities, including contractors, subcontractors, or grantees that CARB utilizes to provide benefits and services to members of the public. [. . .]

As described in the Civil Rights Policy and Discrimination Complaint Process, the Civil Rights Officer coordinates implementation of nondiscrimination activities:

CARB's Executive Officer will have final authority and responsibility for compliance with this policy. CARB's Civil Rights Officer, on behalf of the Executive Officer, will coordinate this policy's implementation within CARB, including work with the Ombudsman's Office, Office of Communications, and the staff and managers within a program or activity offered by CARB. The Civil Rights Officer coordinates compliance efforts, receives inquiries concerning non-discrimination requirements, and ensures CARB is complying with state and federal reporting and record retention requirements, including those required by Code of Federal Regulations, title 40, section 7.10 et seq.

The Civil Rights Policy and Discrimination Complaint Process also describes in detail the complaint procedure, as follows:

¹⁷ CARB. California Air Resources Board and Civil Rights. <https://ww2.arb.ca.gov/california-air-resources-board-and-civil-rights>; Civil Rights Policy and Discrimination Complaint Process. November 1, 2016. <https://ww2.arb.ca.gov/sites/default/files/2023-01/2016-11-03%20CARB%20Civil%20Rights%20Policy%20Revised%20Final.pdf>

A Civil rights complaint may be filed against CARB or other people or entities affiliated with CARB, including contractors, subcontractors, or grantees that CARB utilizes to provide benefits and services to members of the public. The complainant must file his or her complaint within one year of the alleged discrimination. This one-year time limit may be extended up to, but no more than, an additional 90 days if the complainant first obtained knowledge of the facts of the alleged violation after the expiration of the one-year time limit. [. . .]

The Civil Rights Officer will review the facts presented and collected and reach a determination on the merits of the complaint based on a preponderance of the evidence. The Civil Rights Officer will inform the complainant in writing when CARB has reached a determination on the merits of the discrimination complaint. Where the complainant has articulated facts that do not appear discriminatory but warrants further review, the Civil Rights Officer, in his or her discretion, may forward the complaint to a party within CARB for action. The Civil Rights Officer will inform the complainant, either verbally or in writing, before facilitating the transfer. [. . .]

CARB will not tolerate retaliation against a complainant or a participant in the complaint process. Anyone who believes that they have been subject to retaliation in violation of this policy may file a complaint of retaliation with CARB following the procedures outlined in this policy.

There is a Civil Rights Complaint Form available¹⁸ on the webpage, which should be used by members of the public to file a complaint of discrimination against CARB that an individual believes occurred during the administration of its programs and services offered to the public. As described on CARB's webpage, for all complaints submitted, the Civil Rights Officer will review the complaint to determine if there is a prima facie complaint (which means, if all facts alleged were true, would a violation of the applicable policy exist). If the Civil Rights Officer identifies a prima facie complaint in the jurisdiction of the Civil Rights Office, the Civil Rights Office will investigate and determine whether there is a violation of the policy.

The laws and regulations that CARB implements through this policy include:

- Code of Federal Regulations, Title 40 Parts 5 and 7;
- Title VI of the U.S. Civil Rights Act of 1964, as amended;
- Section 504 of the Rehabilitation Act of 1973;
- Age Discrimination Act of 1975;
- Title IX of the Education Amendments of 1972;
- California Government Code, title 2, Division 3, Part 1, Chapter 2, Article 9.5, *Discrimination*, section 11135 et seq.; and

¹⁸ CARB. Civil Rights Complaint Form. July 2019. https://ww2.arb.ca.gov/sites/default/files/2023-01/eo_eeo_033_civil_rights_complaints_form.pdf

- California Code of Regulations, title 2, section 10000 et seq.

As part of its overarching civil rights and environmental justice efforts, CARB is in the process of updating its Civil Rights Policy and will make those publicly available once complete. These updates will reflect available U.S. EPA and U.S. Department of Justice resources for Title VI and environmental justice policies. CARB encourages U.S. EPA to issue additional guidance to further clarify Title VI requirements and expectations to assist state implementation efforts.

C. District Control Program

Consistent with its regulatory authority, the District has adopted rules and programs for reducing emissions from a broad scope of stationary, area, and mobile sources. In addition to accounting for reductions from their current control program, the District's control strategy in the 2024 South Coast PM2.5 Plan includes 38 control measures that will achieve emissions reductions through regulations, accelerated deployment of available cleaner technologies, best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), and incentives.

The measures proposed in the 2024 South Coast PM2.5 Plan, except for BCM-19, are carried forward from the 2022 AQMP and 2016 AQMP and provide significant reductions in 2030. Out of the 38 proposed control measures, 23 target reductions from stationary sources and the remaining 15 measures target reductions from mobile sources. For a list of the District measures see Table 11.

Further details on the District's control program are provided in Chapter 4 and Appendix IV-A of the 2024 South Coast PM2.5 Plan.

Table 11 - District Measures in the 2024 South Coast PM2.5 Plan

Measure Number	Title [Pollutant]	Previous Plan Measure	2030 Emission Reductions
District Stationary Source NOx Measures			
BCM-01	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Residential Water Heating [PM2.5, NOx]	2022 AQMP (R-CMB-01)	TBD
BCM-02	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Residential Space Heating [PM2.5, NOx]	2022 AQMP (R-CMB-02)	TBD
BCM-03	Emission Reductions from Residential Cooking Devices Appliances - Residential Space Heating [PM2.5, NOx]	2022 AQMP (R-CMB-03)	TBD
BCM-04	Emission Reductions from Replacement with Zero Emission or Low NOx Appliances - Residential Other Combustion Sources	2022 AQMP (R-CMB-04)	TBD
BCM-05	Emission Reductions from Emergency Standby Engines [PM2.5, NOx]	2022 AQMP (L-CMB-04)	0.04 [PM2.5] 0.36 [NOx]
BCM-06	Emission Reductions from Diesel Electricity Generating Facilities [NOx]	2022 AQMP (L-CMB-06)	0.16 [NOx]
BCM-07	Emission Reductions from Incinerators [NOx]	2022 AQMP (L-CMB-09)	0.81 {NOx}
Total Quantified PM2.5 and NOx Reductions			0.04 [PM2.5] 1.33 [NOx]
South Coast AQMD Co-Benefits from Energy and Climate Change Programs Measures:			
ECC-01	Co-benefits from Existing and Future Greenhouse Gas Programs, Policies, and Incentives [All Pollutants]	2022 AQMP (ECC-01)	TBD
ECC-02	Co-benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures [All Pollutants]	2022 AQMP (ECC-02)	TBD
ECC-03	Additional Enhancements in Reducing Existing Residential Building Energy Use [All Pollutants]	2022 AQMP (ECC-03)	TBD
South Coast AQMD NH3 Measures:			
BCM-08	Emission Reductions from Livestock Waste at Confined Animal Facilities [NH3]	2016 AQMP (BCM-04)	0.27 [NH3]
BCM-09	Ammonia Emission Reductions from NOx Controls [NH3]	2016 AQMP (BCM-05)	TBD
BCM-10	Emission Reductions from Direct Land Application of Chipped and Ground Uncomposted Greenwaste [NH3]	2016 AQMP (BCM-10)	0.08 [NH3]
BCM-11	Emission Reductions from Organic Waste Composting [NH3]	2016 AQMP (BCM-10)	TBD
Total Quantified NH3 Reductions			0.35 [NH3]
District Directly-emitted PM2.5 Measures:			
BCM-12	Further Emission Reductions from Commercial Cooking [PM2.5]	2016 AQMP (BCM-01)	TBD
BCM-13	Emission Reductions from Cooling Towers [PM2.5]	2016 AQMP (BCM-02)	TBD
BCM-14	Further Emission Reductions from Paved Road Dust Sources [PM2.5]	2016 AQMP (BCM-03)	TBD
BCM-15	Emission Reductions from Abrasive Blasting Operations [PM2.5]	2016 AQMP (BCM-06)	TBD

Measure Number	Title [Pollutant]	Previous Plan Measure	2030 Emission Reductions
BCM-16	Emission Reductions from Stone Grinding, Cutting and Polishing Operations [PM2.5]	2016 AQMP (BCM-07)	TBD
BCM-17	Emission Reductions from Prescribed Burning for Wildfire Prevention [PM2.5]	2022 AQMP (MCS-02)	TBD
BCM-18	Further Emission Reductions from Wood-Burning Fireplaces and Wood Stoves [PM2.5]	2016 AQMP (BCM-09)	TBD
BCM-19	Emission Reductions from Unpaved Road Dust Sources [PM2.5]	New	TBD
Total Directly-emitted PM2.5 Reductions			
South Coast AQMD Other Measures:			
BCM-20	Application of All Feasible Measures [All Pollutants]	2022 AQMP (MCS-01)	TBD
South Coast AQMD Emission Growth Management Measures:			
EGM-01	Emission Reductions from New Development and Redevelopment [All Pollutants]	2022 AQMP (EGM-01)	TBD
EGM-02	Emission Reductions from Clean Construction Policy [All Pollutants]	2022 AQMP (EGM-03)	TBD
South Coast AQMD Facility-Based Measures:			
MOB-01	Emission Reductions at Commercial Marine Ports [PM2.5, NOx]	2022 AQMP (MOB-01)	TBD
MOB-02	Emission Reductions at New and Existing Rail Yards [PM2.5, NOx]	2022 AQMP (MOB-02)	TBD
MOB-03	Emission Reductions at Warehouse Distribution Centers [PM2.5, NOx]	2022 AQMP (MOB-03)	TBD
MOB-04	Emission Reductions at Commercial Airports [PM2.5, NOx]	2022 AQMP (MOB-04)	TBD
South Coast AQMD On-Road and Off-Road Measures:			
MOB-05	Accelerated Retirement of Light-Duty and Medium-Duty Vehicles [PM2.5, NOx]	2022 AQMP (MOB-05)	TBD
MOB-06	Accelerated Retirement of On-Road Heavy-Duty Vehicles [PM2.5, NOx]	2022 AQMP (MOB-06)	TBD
MOB-07	On-Road Mobile Source Emission Reduction Credit Generation Program [PM2.5, NOx]	2022 AQMP (MOB-07)	TBD
MOB-08	Small Off-Road Engine Equipment Exchange Program [PM2.5, NOx]	2022 AQMP (MOB-08)	TBD
MOB-09	Further Emission Reductions from Passenger Locomotives [PM2.5, NOx]	2022 AQMP (MOB-09)	TBD
MOB-10	Off-Road Mobile Source Emission Reduction Credit Generation Program [PM2.5, NOx]	2022 AQMP (MOB-10)	TBD
South Coast AQMD Incentive-Based Measures:			
MOB-11	Emission Reductions from Incentive Programs [PM2.5, NOx]	2022 AQMP (MOB-11)	TBD
MOB-12	Pacific Rim Initiative for Maritime Emission Reductions [PM2.5, NOx]	2022 AQMP (MOB-12)	TBD
South Coast AQMD Other Mobile Source Measures:			
MOB-13	Rule 2202 - On-Road Motor Vehicle Mitigation Options [PM2.5, NOx]	2022 AQMP (MOB-14)	TBD

VII. Modeled Results

The Act requires the use of air quality modeling to demonstrate attainment of a PM2.5 standard. The modeled attainment demonstration in the 2024 South Coast PM2.5 Plan was prepared using photochemical dispersion and meteorological modeling tools following U.S. EPA guidelines¹⁹. The model utilizes information from emission inventories, meteorology, topography, and air quality to establish the relationship between emissions and air quality at each monitor. The model is then used to simulate future air quality based on changes in emissions resulting from current and future air pollution controls.

Table 12 provides a summary of the emissions inventories used in the attainment modeling. These include the baseline emissions inventories for PM2.5, NOx, and ammonia for the 2018 base year, the projected emissions inventories for 2025 and baseline and projected emissions for 2030. These emissions inventories provide the input into the modeled attainment demonstration for which the results are presented in Figure 3.

Table 12 - PM2.5, NOx, and Ammonia Projected Emissions Inventories

(tpd, annual average, out to 100 nautical miles)

PM2.5 (tons per day, tpd)	2018	2025	2030
Baseline Emissions	56.04	54.01	54.05
Line Item Adjustments	-	0.14	0.83
Control Measure Reductions	-	0	0.54
Projected Emissions	-	53.87	52.68
NOx (tpd)	2018	2025	2030
Baseline Emissions	383.02	239.40	210.31
Line Item Adjustments	-	3.26	24.24
Control Measure Reductions	-	0.00	10.57
Projected Emissions	-	236.14	175.50
Ammonia (tpd)	2018	2025	2030
Baseline Emissions	74.54	77.79	79.31
Line Item Adjustments	-	0.10	2.96
Control Measure Reductions	-	0.00	0.24
Projected Emissions	-	77.69	76.11

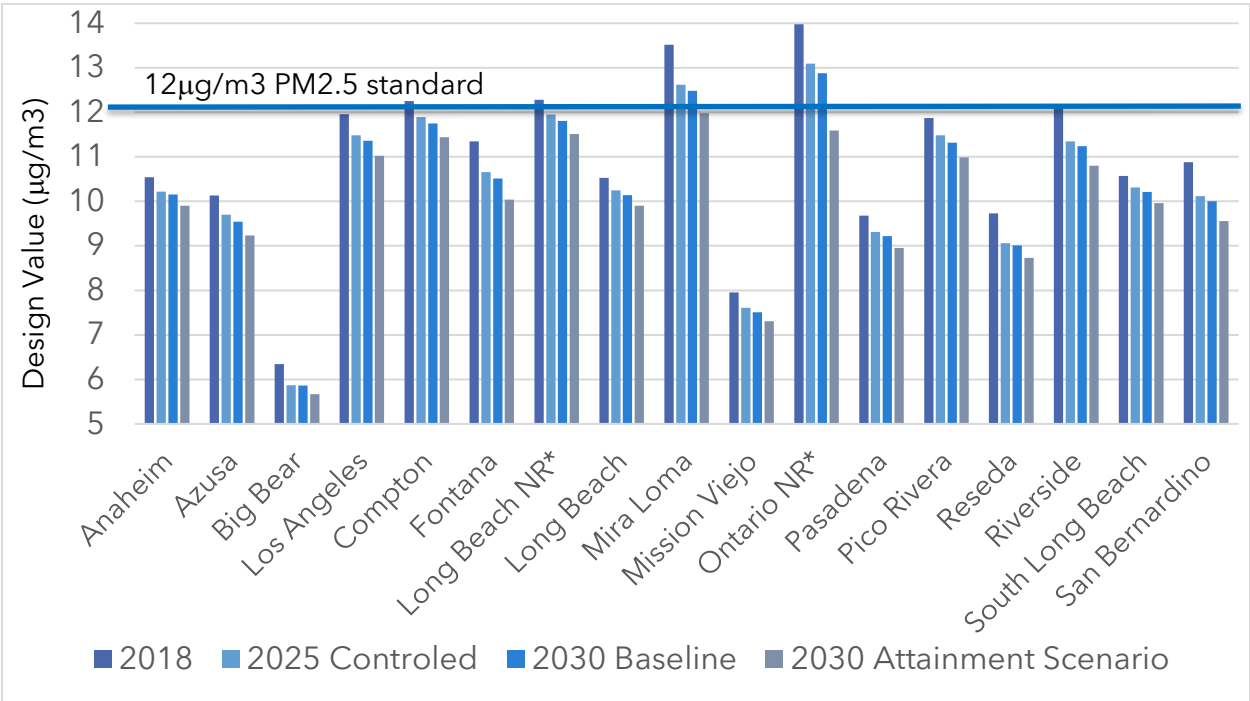
The modeled predictions for annual PM2.5 concentrations were calculated for the serious attainment year, 2025, and the serious extension attainment year, 2030. The model predicted that the South Coast would not attain the standard with projected emissions in 2025 or with baseline emissions from current programs in 2030, but that the South Coast would attain with projected emissions including line-item adjustments and control measure reductions in 2030.

¹⁹ U.S. EPA, 2018, Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5 and Regional Haze, available at [o3-pm-rh-modeling_guidance-2018.pdf \(epa.gov\)](https://www.epa.gov/o3-pm-rh-modeling-guidance-2018.pdf)

To demonstrate attainment in 2030, the 2024 South Coast PM2.5 Plan utilized a hybrid approach, first using a regional chemical transport model that predicted air quality over an area of 4 km by 4 km grid cells. Modeling at the regional level demonstrated that the control strategy provides for attainment at all of the South Coast monitors except for the Ontario PM2.5 near-road monitor. The Ontario PM2.5 near-road monitor was installed in 2015 to monitor air quality close to the roadway and is heavily influenced by emissions from those sources. Since emissions from on-road sources are decreasing at a faster rate than total emissions in the region, a specific methodology that better represents the impact of on-road emissions on the near-road monitor was developed following U.S. EPA guidance. A detailed description of the near-roadway modeling can be found in Chapter 6 of Appendix II of the 2024 South Coast PM2.5 Plan.

Figure 3 demonstrates that the control strategy in the 2024 South Coast PM2.5 Plan will bring all monitors in the South Coast into attainment for the 12 µg/m³ PM2.5 standard in 2030.

Figure 33 - Modeled Results at all Monitors in the South Coast Air Basin



Complete details on the modeled attainment demonstration can be found in Chapter 5 and Appendix II of the 2024 South Coast PM2.5 Plan.

VIII. Additional Clean Air Act Requirements

A. Best Available Control Measures and Best Available Control Technology

Section 189 of the Act requires that PM SIPs for serious areas include a demonstration that Best Available Control Measures (BACM) are implemented no later than 4 years after reclassification. BACM must include Best Available Control Technology (BACT) on all stationary sources meeting the “major source” definition of 70 tons per year (tpy) of emissions of PM_{2.5} or PM_{2.5} precursors.

The District 2024 South Coast PM_{2.5} Plan includes an analysis of the District’s stationary control measures and rules and CARB’s rules and measures for mobile sources. The District determined that their existing rules and regulations meet BACM requirements and CARB determined that our existing rules and regulations meet and exceed BACM requirements. A comprehensive assessment of all potential control measures is presented in Appendix III.

B. Reasonable Further Progress

The Act requires attainment plans to demonstrate reasonable further progress (RFP). RFP is the steady progress in emission reductions between the baseline year and attainment date, and ensures that nonattainment areas will begin reducing the emissions causing air pollution in a timely manner and not delay implementation of control programs until immediately before the attainment deadline.

For the 12 µg/m³ PM_{2.5} standard, the emissions that must demonstrate RFP include direct PM_{2.5} and applicable precursors. As discussed above, the District determined that SO_x and ROG do not contribute significantly to PM_{2.5} levels in the South Coast; as such, they are excluded from the RFP demonstration.

For direct PM_{2.5}, NO_x and ammonia, the PM_{2.5} Rule requires a demonstration that emissions will be decreased in a linear manner from the base year emissions to the attainment inventory. Alternatively, a stepwise demonstration of reductions is allowed with proper justification.

Table 13 provides a summary of the South Coast RFP demonstration for direct PM_{2.5}, NO_x, and ammonia in the milestone years of 2025, 2028, the attainment year 2030 and the post-attainment year 2031. The RFP demonstrations for direct PM_{2.5} and NO_x are generally linear, while the RFP demonstration for ammonia uses a stepwise approach.

The RFP demonstration in the 2024 South Coast PM_{2.5} Plan meets the requirements of section 189(c) of the Act as interpreted in the PM_{2.5} Rule. More information can be found in Chapter 6 of the 2024 South Coast PM_{2.5} Plan.

Table 13 - South Coast RFP Demonstration for the 12 mg/m³ PM2.5 Standard

PM2.5 (tpd)	2018	2025	2028	2030	2031
Baseline Emissions	56.04	56.04	56.04	56.04	56.04
Line Item Adjustments	-	0.14	0.14	0.14	0.14
Control Measure Reductions	-	0	0	0.54	0.54
Projected Emissions	-	53.87	53.64	52.68	52.69
Generally Linear RFP Target	-	54.08	53.64	52.68	52.69
NOx (tpd)	2018	2025	2028	2030	2031
Baseline Emissions	383.02	239.40	219.29	210.31	207.17
Line Item Adjustments	-	3.26	10.06	24.24	24.24
Control Measure Reductions	-	0	0	10.60	10.60
Projected Emissions	-	236.14	209.23	175.37	172.23
Generally Linear RFP Target	-	236.14	209.23	175.37	172.23
Ammonia (tpd)	2018	2025	2028	2030	2031
Baseline Emissions	74.54	77.79	78.91	79.31	79.48
Line Item Adjustments	-	0.10	1.40	2.96	2.96
Control Measure Reductions	-	0.00	0.00	0.24	0.24
Projected Emissions	-	77.69	77.51	76.11	76.28
Stepwise RFP Target	-	77.69	77.51	76.11	76.28

C. Motor Vehicle Emissions Budgets

Section 176(c) of the Act establishes transportation conformity requirements intended to ensure that transportation activities do not interfere with air quality. Transportation plans, programs, and projects that obtain federal funds or approvals must not result in emissions that exceed the “motor vehicle budget,” the portion of the total emissions inventory from on-road highway and transit vehicles in all RFP milestone years and the attainment year of an approved SIP. Therefore, the transportation plans must be shown to conform to applicable SIPs before being approved by a Metropolitan Planning Organization (MPO).

Motor vehicle emission budgets (MVEBs) for the milestone years 2025, 2028 and 2031, the attainment year, 2030, were released as part of Chapter 6 of the *Draft South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard* released in March 2024. Since that time, an error was identified related to the inclusion of unpaved road dust from federal roads; as such, updated MVEBs are found in Table 14 below. Table 14 replaces Table 6-9 in the Draft 2024 South Coast PM2.5 Plan. These motor vehicle budgets meet the requirements of CFR 51.1003(d).

Table 14: Summary MVEB for the South Coast PM2.5 Attainment Plan (tons per day)

	2025			2028			2030			2031		
	NOx	NH3	PM2.5	NOx	NH3	PM2.5	NOx	NH3	PM2.5	NOx	NH3	PM2.5
Vehicular Exhaust (including brake/tire wear for PM2.5)	86.7	20.2	4.0	74.8	21.0	3.9	68.5	21.2	3.9	65.9	21.2	3.8
Construction Road Dust	-	-	0.3	-	-	0.3	-	-	0.3	-	-	0.3
Paved Road Dust	-	-	8.9	-	-	9.1	-	-	9.1	-	-	9.1
Unpaved Road Dust	-	-	1.2	-	-	1.2	-	-	1.2	-	-	1.2
Reductions from HD I/M	14.2	0.0	0.1	17.5	0.0	0.2	18.5	0.0	0.2	18.8	0.0	0.2
Reductions from Advanced Clean Fleets	1.1	0.1	0.0	3.0	0.5	0.0	4.8	0.8	0.1	4.8	0.8	0.1
Reductions from ACCII	-	-	-	0.7	0.9	0.1	1.5	2.1	0.2	1.5	2.1	0.2
Reductions from Clean Trucks Plan	-	-	-	0.2	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0
Total^a	71.36	20.14	14.29	53.36	19.58	14.24	43.10	18.25	14.01	40.24	18.29	13.99
Motor Vehicle Emission Budget^b	72	21	15	54	20	15	44	19	15	41	19	14

^a Values from may not add up due to rounding.

^b Motor Vehicle Emission Budgets calculated are rounded up to the nearest tenth of a tpd.

Source: EMFAC2021 v1.02 and CEPAM2022 v1.01

D. Quantitative Milestones

Section 189(c)(1) of the Act requires that PM2.5 SIPs include specific quantitative milestones (QMs) to demonstrate reasonable further progress toward attainment of the applicable PM2.5 standard has been met. For the 12 µg/m³ PM2.5 standard, the milestone years in the 2024 South Coast PM Plan are 2025, 2028 and an additional post attainment year of 2031.²⁰

The 2024 South Coast PM2.5 Plan includes QMs from both the District and CARB whose implementation will demonstrate that the required reductions in the milestone years have been met. The QMs in the 2025 and 2028 milestone years include the implementation of CARB Clean Truck Check Program, the CARB Advanced Clean Fleets Regulation, and the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation. The QMs for the District in these years include the implementation of District Rule 1109.1 and the District's adoption and implementation of applicable PM2.5 Plan measures specified in Chapter 4 of the 2024 South Coast PM Plan. In the 2031 post-attainment year, the QMs include CARB SIP measures adopted between 2024 and 2030 per the schedule in the 2024 South Coast PM Plan, in addition to the District Rule 1109.1, and a demonstration by the District of the adoption of applicable measures since the 2028 milestone year, a demonstration of implementation of all PM2.5 Plan measures with committed schedules, and a demonstration that the aggregate emission reduction commitment was achieved for the 2030 attainment year. Details of the QMs can be found in Chapter 6 of the 2024 PM2.5 Plan.

E. Contingency Measures

Section 172(c)(9) of the Act requires that attainment plans for PM2.5 nonattainment areas include contingency measures. The PM2.5 Rule further specifies that these measures must have an automatic triggering mechanism in place. The contingency must take effect with minimal action by either the state or the EPA following a determination by the Administrator that the area has failed to: 1) meet any RFP requirement in an attainment plan, 2) meet any quantitative milestone in an attainment plan, 3) submit a quantitative milestone report, or 4) attain the applicable PM2.5 standard by the applicable attainment date.

U.S. EPA had historically interpreted the contingency requirement to represent one year's worth of RFP from measures that are already in place or that would take effect without further rulemaking action. However, multiple court decisions over the last few years in the U.S. Courts of Appeals for the Ninth Circuit and District of Columbia Circuit have effectively disallowed this approach. In response to the decision and to provide guidance to the states, U.S. EPA released new Draft Guidance in March 2023²¹; the Draft Guidance proposes a new method for how to calculate one year's worth of progress for the targeted amount of contingency measures reductions and provides new clarification on the reasoned justification U.S. EPA requires to facilitate approval of contingency measures with lesser

²⁰ [81 FR 58010](#)

²¹ [88 FR 17571](#)

amounts of reductions. CARB and the Districts continue to await final guidance to ensure certainty that contingency measures developed will meet requirements.

Since release of the Draft Guidance, CARB and the District have analyzed our respective suites of control measures to identify potential contingency measure options and developed the required reasoned justifications in the form of infeasibility analyses to support approval of contingency measures that achieve less than the amount of reductions required under the Draft Guidance. In October 2023, CARB adopted the California Smog Check Contingency Measure SIP Revision²² (Smog Check Contingency Measure) that included a trigger for the 12 µg/m³ PM_{2.5} standard in the South Coast. In December 2023, U.S. EPA proposed approval of the Smog Check Contingency Measure²³.

Chapter 6 and Appendix V of the 2024 South Coast PM_{2.5} Plan provide details of the District's triggered contingency measure, Rule 445, *Wood-Burning Devices*. Rule 445, approved by U.S. EPA on March 8, 2022²⁴. The contingency measures would be triggered in the event that the South Coast fails to meet RFP, meet milestone requirements, or attain the standard.

Together, CARB and the District's triggered contingency measures and reasoned justifications in the form of infeasibility analyses satisfy contingency measure requirements of the Act for the South Coast under the 12 µg/m³ PM_{2.5} standard.

F. New Source Review Requirements

Section 189(a)(1)(A) of the Act requires that nonattainment areas submit into the SIP New Source Review (NSR) rules or programs for permitting the construction and operation of new or modified major stationary sources. District Regulation XIII establishes the federal and State mandated NSR program for new, modified, or relocated sources. The NSR program ensures that all new and modified sources install BACT, and their emission increases are fully offset.

District Rule 1325, *Federal PM_{2.5} New Source Review Program*, incorporates the requirements for PM_{2.5} and its precursors into Regulation XIII and has been amended to the serious area requirements. In 2021, U.S. EPA approved Rule 1325 as meeting all applicable NSR requirements²⁵. Chapter 6 of the 2024 PM_{2.5} Plan provides more information on the District's NSR program.

G. Serious Deadline Extension Requirements

Section 188(e) of the Act sets requirements for an area classified as serious for a PM standard and requiring an extension of the serious area attainment deadline beyond the

²² CARB, California Smog Check Contingency Measure

<https://ww2.arb.ca.gov/resources/documents/california-smog-check-contingency-measure>

²³ 88 FR 87981

²⁴ 87 FR 12866

²⁵ 86 FR 58592

10 years allowed under section 188(c). To be granted the extension, the State must demonstrate the area: 1) cannot practicably attain by the serious deadline, 2) that the area is implementing MSM, and 3) that a demonstration of compliance with all requirements and commitments in the applicable SIP be included. Chapter 6 of the 2024 South Coast PM2.5 Plan includes a discussion of District compliance with each of the requirements needed for an extension of the attainment deadline. The 2024 South Coast PM2.5 Plan meets the requirement of section 188(e) of the Act, as detailed below.

1) Impracticability Demonstration

The 2024 South Coast PM2.5 Plan demonstrates that the modeled design values in 2025 are well above $12.0 \mu\text{g}/\text{m}^3$ at multiple monitors under baseline and projected emissions (see Chapter 5, Table 5-4). The modeled design value in 2025 at the high site, the Ontario near-road monitor, is $13.09 \mu\text{g}/\text{m}^3$. It is impractical and infeasible to implement additional reductions beyond already adopted regulations by December 31, 2024, given the amount of time needed to adopt and implement rules and regulations. Since adopting and implementing any additional regulations by 2025 is not achievable, attainment of the $12 \mu\text{g}/\text{m}^3$ PM2.5 standard in 2025 is not possible. The proposed attainment year, 2030, reflects the challenges and complexities associated with this plan while balancing expeditious attainment and the time needed to adopt a SIP revision, develop rules, and achieve emission reductions. The 2024 South Coast PM2.5 Plan meets the requirement of section 188(e) of the Act by demonstrating that attainment in 2025 is impracticable. See Chapter 6 of the 2024 South Coast PM2.5 Plan for more information.

2) Most Stringent Measures

In addition to the BACM/BACT requirements on control measures described above, section 188(e) of the Act requires that serious areas requesting an attainment date extension demonstrate that the measures in the SIP also meet the more stringent level of control known as MSM. Appendix III of the 2024 South Coast PM2.5 Plan provides a detailed description of the District analysis of their current measures, and identifies four measures that need to be amended and implemented by December 2029. These include amending Rule 445 that sets the threshold for no burn days to remove the low-income exception; amending Rule 223 to lower the permitting thresholds for confined animal facilities; amending Rule 1138 to lower the threshold to require catalytic oxidizers for chain-driven charbroilers; and to include a requirement to compost chipped and ground greenwaste prior to land applications as part of control measure BCM-10.

For each State-regulated source category emitting direct PM2.5 and its precursors, CARB staff concluded that the suite of control measures currently being implemented by CARB satisfies the applicable MSM requirements, and that measure commitments still to be adopted go beyond MSM requirements. This analysis found that California's mobile source control program is the most stringent and far-reaching suite of mobile source control measures currently being implemented in the nation, see Attachment B of Appendix III. The District and CARB have met the requirement for MSM in section 188(c) of the Act.

3) Compliance With the Applicable SIP

The Act also requires that serious areas requesting an attainment date extension demonstrate compliance with commitments made in the applicable U.S. EPA-approved SIP; for the 2024 South Coast PM_{2.5} Plan, the applicable U.S. EPA-approved SIP consists of the moderate area elements submitted as part of the 2016 AQMP. All the required elements of the moderate SIP in the 2016 AQMP were approved by U.S. EPA with the exception of the contingency requirement for attainment and RFP. For the contingency measure requirement, U.S. EPA granted a conditional approval based on the commitment to adopt and submit a contingency measure for approval. The District amended Rule 445 in 2020 to add contingency provisions for the PM_{2.5} standard, and U.S. EPA has since approved these amendments to Rule 445.²⁶

The District has met all commitments in the 2016 AQMP as applicable for the moderate area requirements under the 12 µg/m³ PM_{2.5} standard. Since CARB did not commit to any controls to reduce emissions to meet moderate area requirements in the 2016 AQMP, CARB has no outstanding commitments to meet. Chapter 6 of the 2024 South Coast PM_{2.5} Plan provides more information.

²⁶ [87 FR 12866](#)

IX. Environmental Impacts

A. Introduction

This chapter provides the basis for CARB's determination that no subsequent or supplemental environmental analysis is required for the proposed 2024 South Coast PM2.5 Plan, with the CARB Staff Report ("project"). A brief explanation of this determination is provided in subsection B below.

CARB's regulatory program which involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans for the protection and enhancement of the State's ambient air quality has been certified by the California Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA) (see California Code of Regulations (CCR), title 14, section 15251(d)). Public agencies with certified regulatory programs are exempt from certain CEQA requirements, including but not limited to, preparing environmental impact reports, negative declarations, and initial studies. CARB, as a lead agency, prepares a substitute environmental document (referred to as an "Environmental Analysis" or "EA") as part of the Staff Report to comply with CEQA (see 17 CCR §§ 60000-60008). This EA serves as a substitute document equivalent to an addendum to the prior 2022 State SIP Strategy EA to explain CARB's determination that no additional environmental analysis is required for this action.

B. Prior Environmental Analysis

The 2024 South Coast PM2.5 Plan provides the strategy for how the region will meet the 2012 PM2.5 NAAQS in the South Coast as expeditiously as practicable, but no later than December 31, 2030, by relying on previously adopted control measures from the 2022 AQMP and the 2016 AQMP to reduce emissions of NO_x, ammonia and directly emitted PM2.5. At the time the 2022 AQMP and 2016 AQMP were developed, each was considered a "project" as defined by CEQA Guidelines Section 15378 and the District was lead agency under CEQA because it was the "public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment." [Public Resources Code Section 21067]. Further, since the District Governing Board had the primary responsibility for approving the entirety of both projects, the District was the most appropriate public agency to act as lead agency for the projects. [CEQA Guidelines Section 15051(b)]. The 2022 AQMP and 2016 AQMP each: 1) had environmental impacts which were evaluated in a Final Program Environmental Impact Report (Program EIR); and 2) were discretionary actions which were individually considered and approved by the District Governing Board. Therefore, the proposed project, the 2024 South Coast PM2.5, is integrally related to the 2022 AQMP and the 2016 AQMP for which two previous environmental analyses have been prepared: 1) the Final Program EIR for 2022 AQMP which was certified by the South Coast AQMD Governing Board on December 2, 2022; and 2) the Final Program EIR for 2016 AQMP which was certified by the District Governing Board on March 3, 2017. The Final Program EIRs for the 2022 AQMP and the 2016 AQMP identified potentially significant impacts, mitigation measures were made a condition of

approval of the 2022 AQMP and the 2016 AQMP and were adopted. Further, since mitigation measures were adopted for the 2022 AQMP and the 2016 AQMP, a Mitigation, Monitoring, and Reporting Plan for the 2022 AQMP and the 2016 AQMP, pursuant to Public Resources Code Section 21081.6 and CEQA Guidelines 15097, was also required and adopted. Further, because the Final Program EIRs concluded that the 2022 AQMP and the 2016 AQMP will each have potentially significant and unavoidable adverse impacts on the environment, Findings were made pursuant to CEQA Guidelines Section 15091, and a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093 was adopted.

Further, when the 2022 State SIP Strategy was proposed, CARB prepared an environmental analysis (EA) under its certified regulatory program (17 CCR §§ 60000-60008) to comply with the requirements of CEQA (Public Resources Code section 21080.5). The EA, included as Appendix B to the Proposed 2022 State SIP Strategy entitled Final Environmental Analysis for the proposed 2022 State SIP Strategy for the State Implementation Plan, dated September 16, 2022,²⁷ determined the 2022 State SIP Strategy could result in the following short-term and long-term impacts: beneficial impacts to air quality (long-term operational-related) and greenhouse gases; less-than-significant impacts to energy demand, mineral resources, population and housing, public services, recreational services and wildfire; and potentially significant and unavoidable adverse impacts to aesthetics, agriculture and forest resources, air quality (short-term construction-related), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, transportation/traffic, tribal cultural resources, and utilities and service systems.

C. Analysis

Legal Standards

When undertaking further planning actions for which an EIR or negative declaration (or equivalent substitute document) has previously been prepared, CARB looks to Public Resources Code section 21166 and CEQA Guidelines section 15162 for guidance on the requirements for subsequent or supplemental environmental review.

CEQA Guidelines section 15162 states:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new

significant environmental effects or a substantial increase in the severity of previously identified significant effects;

- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:*
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;*
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;*
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or*
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

If a subsequent or supplemental EIR or negative declaration is not required, the lead agency may document its decision and supporting evidence in an addendum (14 CCR § 15164 (e)). The addendum and lead agency's findings should include a brief explanation, supported by substantial evidence, of the decision not to prepare a subsequent or supplemental EIR or negative declaration (14 CCR § 15164(e)). An addendum need not be circulated for public review, but must be considered by the lead agency prior to making a decision on the project (14 CCR § 15164(c), (d)).

Basis for Determination

As noted above, the District previously analyzed the potential environmental impacts from the measures in the 2024 South Coast PM2.5 Plan in its Final Program EIR for the 2016 AQMP and 2022 AQMP. Similarly, CARB analyzed the potential environmental impacts from the 2022 State SIP Strategy in the EA developed for that planning effort. The proposed project here involves compiling these measures previously analyzed in the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP and CARB's 2022 State SIP Strategy EA, quantifying the emissions reductions associated with them, and submitting them to U.S. EPA for inclusion into the California SIP. This exercise does not involve any modifications to any

of the measures. There is no possibility that CARB's quantification of these emissions reductions resulting from measures to which CARB has already committed to pursue may result in a significant adverse impact on the environment, nor any substantial evidence indicating this proposal could adversely affect air quality or any other environmental resource area.

CARB staff has determined that the proposed 2024 South Coast PM2.5 Plan and associated CARB Staff Report do not involve any changes that result in any new significant adverse environmental impacts or a substantial increase in the severity of the significant adverse impacts previously disclosed in the 2022 State SIP Strategy EA or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. Further, there are no changes in circumstances or new information that would otherwise warrant any subsequent or supplemental environmental review. The 2022 State SIP Strategy EA and the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP adequately address the implementation of the proposed project, and no additional environmental analysis is required.

The basis for CARB's determination that none of the conditions requiring further environmental review are triggered by the proposed modifications is based on the following analysis.

- (1) *There are no substantial changes to the components of the proposed project that were previously analyzed in the 2022 SIP Strategy EA and the 2024 South Coast PM2.5 Plan Negative Declaration which require major revisions involving new significant environmental effects or a substantial increase in the severity of previously identified effects.*

The District's Final Program EIRs for the 2016 AQMP and 2022 AQMP and Final EA for the 2022 State SIP Strategy fully address the implementation of the 2024 South Coast PM2.5 Plan and CARB Staff Report, and no additional environmental analysis is required. CARB has determined that the proposed project does not involve any changes that result in any new significant adverse environmental impacts or a substantial increase in the severity of the significant adverse impacts previously disclosed in the Final EA for the 2022 State SIP Strategy or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. CARB does not propose to modify any of the commitments previously analyzed in those documents. The proposed project involves compiling these existing measures from the District's AQMP and CARB's 2022 State SIP Strategy, quantifying the emissions reductions associated with them, and submitting them to U.S. EPA for inclusion into the California SIP. As noted above, this exercise does not involve any modifications to any of the previously approved measures.

- (2) *There are no substantial changes with respect to the circumstances under which the proposed project is being undertaken which require major revisions to the previous CEQA analyses involving new significant environmental effects or a substantial increase in the severity of previously identified effects.*

There are no changes in circumstances that would otherwise warrant any subsequent or supplemental environmental review. CARB has determined that the proposed project does

not involve any changes in circumstances that result in any new significant adverse environmental impacts or a substantial increase in the severity of the significant adverse impacts previously disclosed in the Final EA for the 2022 State SIP Strategy or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. As noted above, CARB does not propose to modify any of the commitments previously analyzed or modify any of the previously approved measures in the Final EA for the 2022 State SIP Strategy or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. The proposed project involves compiling these existing measures from the District's AQMP and CARB's 2022 State SIP Strategy, quantifying the emissions reductions associated with them, and submitting them to U.S. EPA for inclusion into the California SIP. As noted above, this exercise does not involve any modifications to any of the previously approved measures.

- (1) *There is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous CEQA analyses were completed, that changes the conclusions of the environmental analyses with regard to impacts, mitigation measures, or alternatives;*

There is no new information that would otherwise warrant any subsequent or supplemental environmental review. CARB has determined that the proposed project does not involve any new information that changes the conclusions of the Final EA for the 2022 State SIP Strategy or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. As noted above, CARB does not propose to modify any of the commitments previously analyzed or modify any of the previously approved measures in the Final EA for the 2022 State SIP Strategy or the District's Final Program EIRs for the 2016 AQMP and 2022 AQMP. The proposed project involves compiling these existing measures from the District's AQMPs and CARB's 2022 State SIP Strategy, quantifying the emissions reductions associated with them, and submitting them to U.S. EPA for inclusion into the California SIP. As noted above, this exercise does not involve any modifications to any of the previously approved measures.

The District certified its Final Program EIR for the 2016 AQMP in March 2017 and 2022 AQMP in December 2022, and CARB certified the EA for the 2022 State SIP Strategy in September 2022. No supplemental or subsequent environmental analysis is required for the proposed project because, as described above, the proposed project does not result in any new environmental impacts or in a substantial increase in the severity of the impacts previously disclosed for the 2016 AQMP, 2022 AQMP, or the 2022 State SIP Strategy. Further, there are no changes in circumstances or new information that would otherwise warrant any additional environmental review.

Finally, while in an abundance of caution CARB has prepared an addendum-equivalent analysis here, CARB notes that this SIP action also likely does not constitute a CEQA "project" in the first instance. As to the District-proposed measures, CARB lacks jurisdiction to modify or remove these measures for any purpose other than compliance with Clean Air Act requirements. Therefore, CARB's review of those components is effectively ministerial. (*See San Diego Navy Broadway Complex Coalition v. City of San Diego* (2010) 185 Cal.App.4th 924, 934.) As to the CARB-derived measures, CARB has already committed to

pursuing these measures as part of the 2022 State SIP Strategy. CARB's actions here do not modify those previous commitments made at the time CARB approved the 2022 State SIP Strategy; rather, it amounts to quantifying the anticipated reductions from those commitments, and reaffirming CARB's commitment to those reductions.

X. Conclusion and Staff Recommendation

CARB staff has reviewed the 2024 South Coast PM2.5 Plan and has concluded that the 2024 South Coast PM2.5 Plan, together with aggregate emissions reduction commitment and the motor vehicle emissions budgets in this CARB Staff Report, meets the requirements of the Act for the 12 µg/m³ PM2.5 standard for a serious nonattainment area requesting an attainment deadline extension. CARB staff recommends that the Board:

1. Adopt the State commitment to achieve aggregate emission reductions of 9.1 tpd of NO_x, 0.2 tpd of ammonia, and 0.5 tpd of PM2.5 in 2030, and motor vehicle emissions budgets for the years 2025, 2028, 2031, and 2030, as described in this CARB Staff Report;
2. Adopt the 2024 South Coast PM2.5 Plan including the emission inventories, attainment demonstration, RFP demonstration, quantitative milestones, contingency measures, BACM/BACT demonstration, and a Most Stringent Measures demonstration for direct PM2.5 and all applicable PM2.5 precursors; and
3. Direct the Executive Officer to submit the 2024 South Coast PM2.5 Plan, and the aggregate emissions reduction commitment and motor vehicle emissions budgets in the CARB Staff Report, to U.S. EPA as a revision to the California SIP.