# 2026 State Implementation Plan Revisions for the California Extreme Ozone Nonattainment Areas

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# Executive Summary

The State Strategy for the State Implementation Plan (State SIP Strategy) is the document in which CARB commits to pursue adoption of control measures under its authority to support attainment of federal air quality standards. The 2022 State SIP Strategy was incorporated into regional attainment plans for the 70 parts per billion (ppb) 8-hour ozone standard (70 ppb ozone standard) and the 12 µg/m3 annual fine particulate matter (PM2.5) standard (12 µg/m3 PM2.5 standard) submitted to the U.S. Environmental Protection Agency (U.S. EPA) in 2023 to 2024. The 2022 State SIP Strategy included CARB commitments to pursue a variety of new measures for on-road mobile, off-road mobile, and other sources of emissions.

Over the last year, California's clean air progress has been undermined by unprecedented federal interference, including the illegal attempts at disapproval of major emissions standards and other regulations. This obstruction threatens the state's ability to meet federal air quality standards, putting public health at risk for millions of Californians – especially those in the most polluted communities.

The commitments and baseline emissions inventories included in the 2022 State SIP Strategy and related attainment plans did not account for the unprecedented and illegal federal actions that severely hinder CARB's ability to achieve emission reductions to support attainment across California. U.S. EPA has not acted on the 2022 State SIP Strategy and the commitments included, or the regional attainment plans for the 70 ppb ozone standard and the 12 µg/m3 PM2.5 standard that relied on those commitments. Therefore, revisions are needed to the 2022 State SIP Strategy commitments and the regional attainment plans to account for the adverse federal actions, support approval of the plans, and thus avoid onerous sanctions that could result from state implementation plan (SIP) disapprovals by U.S. EPA.

In the *2026 State Implementation Plan Revisions for the California Extreme Ozone Nonattainment Areas* (2026 Extreme Ozone SIP Revision), CARB is proposing revisions to the measure commitments originally included in the 2022 State SIP Strategy and commitments to achieve emissions reductions for nonattainment areas in California for the 70 ppb ozone standard. In addition to revising the commitments, this document also proposes revisions to the planning emissions inventories, reasonable further progress (RFP) demonstrations, and motor vehicle emission budgets (MVEB) for these areas.

# Chapter 1: Introduction

## Federal Actions Against Clean Air

Due to California's unique air quality challenges and its mobile source regulatory program that pre-dates the federal 1967 Air Quality Act and 1970 Clean Air Act, section 209 of the Act preserved California's authority to set emission standards, in the aggregate, that are at least as protective of public health and welfare as applicable federal standards in recognition of California's compelling and extraordinary circumstances.[1] Under the Act, after CARB adopts a vehicle emission standard or other emission-related requirement for new motor vehicles and engines, certain new off-road engines and vehicles, and in-use off-road engines and vehicles, CARB obtains a waiver or authorization to enforce the new vehicle emission standard by demonstrating the regulation is at least as protective as the federal standard and is needed to address unique air quality challenges in the state. Where required, these waivers or authorizations are necessary to CARB's ability to enforce its emission standards for mobile sources, including many of the regulatory commitments in the 2022 State SIP Strategy. In January 2025, under the prior federal administration, the U.S. Environmental Protection Agency (U.S. EPA) granted CARB's requests for waivers and authorizations for four of CARB's programs that achieve substantial criteria pollutant and precursor emissions reductions: Advanced Clean Cars II (ACC II), Heavy-Duty Engine and Vehicle Omnibus (Heavy-Duty Omnibus), Small Off-Road Engines, and In-Use Off-Road Diesel Fueled Fleets.

At the same time, U.S. EPA partially granted CARB's request for authorization for Amendments to the Commercial Harbor Craft Regulation (CHC Regulation) and Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate (TRU Part I Regulation). U.S. EPA failed to act before the change of administration to grant a waiver for the Advanced Clean Fleets (ACF) Regulation and authorization for the In-Use Locomotive Regulation. Due to the lack of action by the previous federal administration and lack of support from the incoming federal administration, CARB withdrew both requests. CARB also withdrew the requests for authorization for the regulatory sections U.S. EPA did not address in the partially granted authorizations for the CHC and TRU Part I Regulations.

In June 2025, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorization requests

[1] In addition to the provisions of the Act that recognize criteria pollutants as a threat to public health, there are provisions of California law that impose obligations to protect public health from air pollution and provide a basis for mobile source regulation. This document does not address those state law-based obligations and related authorities.

granted by U.S. EPA under section 209 of the Act. These actions targeted six public health protective regulations:

- Advanced Clean Trucks (ACT),
- Zero-Emission Airport Shuttle,
- Zero-Emission Powertrain Certification,
- Heavy-Duty Warranty and Maintenance Provisions (Heavy-Duty Warranty Phase 1),
- Heavy-Duty Omnibus, and
- ACC II.

California disagrees with the unconstitutional and illegal use of the Congressional Review Act targeting these six regulations and awaits the legal conclusions through the judicial system.

Further, in January 2026, U.S. EPA took final action to partially disapprove inclusion of CARB's Heavy-Duty Inspection and Maintenance (Heavy-Duty I/M) regulation, or Clean Truck Check, in the California SIP. This partial disapproval is applicable only to portions of the regulation that addresses out-of-state and out-of-country registered vehicles, and does not impact CARB's ability to enforce and implement the Heavy-Duty I/M regulation in its entirety. However, the action further undermines CARB's ability to meet its SIP measure and emission reduction commitments because CARB cannot take SIP credit for the emission reductions achieved from out-of-state vehicles that are subject to the Clean Truck Check Program while operating in California.

Although California continues to challenge the validity of these adverse federal actions, in order to support approval of plans for the 70 ppb ozone standard and 12 µg/m3 PM2.5 standard, CARB is proposing revisions to reflect these actions in the plans to ensure CARB can continue to meet State commitments and avoid the potential for onerous Clean Air Act sanctions.

## 2022 State SIP Strategy Commitments and Related Attainment Plans

CARB adopted the 2022 State SIP Strategy on September 22, 2022. The 2022 State SIP Strategy described CARB staff's roadmap for reducing emissions from State sources as needed to support attainment of the health-based 70 ppb ozone standard by 2037. Under State law, CARB is primarily responsible for developing SIP emission reduction strategies for cars, trucks, and other mobile sources, as well as consumer products and other sources under State authority. Local air districts are primarily responsible for emissions control strategies for stationary sources such as factories and power plants. The 2022 State SIP Strategy included commitments to develop control measures and reduce emissions from State-regulated sources as needed to support attainment by the required attainment dates. The 2022 State SIP Strategy measures and commitments were incorporated into regional attainment plans for the

70 ppb ozone standard and 12 µg/m3 PM2.5 standard. CARB submitted these regional plans along with the 2022 State SIP Strategy commitments to U.S. EPA in 2023 and 2024. U.S. EPA has not acted on these SIP submittals.

The 2022 State SIP Strategy built on measures and commitments already made in the previous version, the 2016 State SIP Strategy, and expanded on new measures and commitments to meet the 70 ppb ozone standard. While most of the 2016 State SIP Strategy measure commitments had been adopted at the time of 2022 State SIP Strategy development, there were three 2016 State SIP Strategy measure commitments remaining and unaccounted for in the baseline inventories including regulations for light-duty passenger vehicles, TRUs, and forklifts. To ensure these remaining three 2016 State SIP Strategy measure commitments were accounted for, the 2022 State SIP Strategy identified the tons to be achieved by these measures as part of the CARB commitments. In accordance with the 2016 and 2022 State SIP Strategy commitments, CARB adopted mobile source regulations over the last few years, which are necessary to reduce emissions and help regions attain, many of which have now been impacted by the adverse federal actions.

The attainment plans for the 70 ppb ozone standard submitted in 2023 and 2024 included modeled attainment demonstrations prepared using photochemical dispersion modeling tools developed following U.S. EPA modeling guidance[2]. The attainment demonstrations accounted for the emissions reductions in the emissions inventories from regulations already adopted and in place, as well as emissions reductions from CARB commitments to pursue specified measures in the 2016 and 2022 State SIP Strategies and/or aggregate emissions reductions commitments under section 182(e)(5) of the Act.

The 2022 State SIP Strategy and regional attainment demonstrations, baseline emissions inventories, and other elements as originally submitted do not account for the federal interference. These actions change the path on which emission reductions are going to be achieved to support attainment across California. U.S. EPA has not acted on the regional attainment plans for the 70 ppb ozone standard or the 2022 State SIP Strategy commitments. Therefore, the 2026 Extreme Ozone SIP Revision proposes updates to the 2022 State SIP Strategy commitments for the regional attainment plans to account for these federal actions and reallocate the emissions reductions to other commitments to support U.S. EPA approval. Specifically, CARB is updating commitments related to the ACC II, ACF, ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty and Maintenance Provisions, CHC, TRU Part I, Heavy-Duty Inspection and Maintenance, the In-Use Locomotive Regulations, and limited other measures; CARB is not updating commitments for the Zero-Emission Airport Shuttle Regulation, and Zero-Emission Powertrain Certification Regulation. The 2026 Extreme

[2] U.S. EPA, 2014, Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5 and Regional Haze, available at https://www.epa.gov/ttn/scram/guidance/guide/Draft_O3-PM-RH_Modeling_Guidance-2014.pdf

Ozone SIP Revision updates the State commitments to pursue measures and to achieve emissions reductions such that the total emissions reductions accounted for in each attainment demonstration, between those accounted for in the emissions inventories and from CARB commitments, is maintained for each Extreme ozone nonattainment area in California.

## Emissions Inventories

The Clean Air Act (Act) requires SIPs to include emissions inventories to support evaluations of sources of air pollution and development of controls. At their core, emissions inventories are a systematic listing of the sources of air pollutants along with the amount of pollutants emitted from each source or category over a given time period. Attainment plans are required to include emissions inventories for the nonattainment area as a basis for modeling to demonstrate attainment and for identifying what sources may need to be targeted through control measures.

CARB's emission inventory is divided into three major categories: stationary, area-wide, and mobile sources. The summer season inventory is used for ozone planning because it reflects the activity levels and conditions presented when higher ozone levels occur in California nonattainment areas. CARB and local air districts worked together to develop emissions inventories in the recently-submitted plans for the precursors of ozone, reactive organic gases (ROG) and oxides of nitrogen (NOx).

Sections 172(c)(3), 182(a)(1), and 182(a)(3) of the Act require nonattainment areas to submit an emission inventory for the baseline year and for specified milestone years thereafter until the attainment date. U.S. EPA guidance requires that baseline inventories be developed for years that are consistent with the base year and milestone years within the RFP demonstration[3]. Specifically, the RFP baseline year emissions inventory should be the emissions inventory for the most recent calendar year, based on U.S. EPA designations, for which a complete triennial inventory was required to be submitted to U.S. EPA. For the 70 ppb ozone standard, U.S. EPA finalized its designations in 2018, meaning 2017 was the most recent calendar year in which a triennial inventory was required. Future year inventories needed for the RFP demonstration begin in the sixth year following the baseline year and continue every three years until attainment.

U.S. EPA guidance also requires that the emissions and emissions reductions included in baseline inventories for RFP purposes occur from within the nonattainment area itself, not extending beyond its boundaries or in the case of coastal nonattainment areas, beyond three nautical miles from the coast. A summary of ROG and NOx planning emissions inventories is included in the chapters below for

[3] *https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-51/subpart-CC/section-51.1310#p-51.1310(a)(2)*

the nonattainment areas for the baseline year 2017, and the milestone years of 2023, 2026, 2029, 2032, 2035, and 2037.

The baseline emissions inventories included in the plans for the 70 ppb ozone standard included the benefits from CARB regulations adopted and in place at the time of plan development. Due to federal actions purporting to disapprove previously-approved waivers and authorizations for the ACT, Heavy-Duty Omnibus, and Heavy-Duty Warranty and Phase I regulations, and U.S. EPA's partial SIP disapproval of the Heavy-Duty I/M regulation, revised planning emissions inventories for the affected categories are necessary. The 2026 Extreme Ozone SIP Revision provides revised planning emissions inventories for the relevant nonattainment areas that include mobile source emissions accounting for the federal actions, but otherwise fully consistent with the planning emissions inventories originally included in the submitted plans.

In addition to the baseline emissions inventories needed to demonstrate RFP, the SIPs must also include base year and attainment year inventories needed to demonstrate attainment of the 70 ppb ozone standard. For the plans included in this report, the base year used for attainment demonstrations was 2018, a year not affected by any of the recent federal attacks on CARB programs. The attainment emissions inventories identifying the level of emissions included in the plan that provided for attainment of the 70 ppb ozone standard in 2037 are not being revised in this action; however, as described above, the State is revising the commitments to reallocate the tonnage as needed and ensure the State can achieve the necessary reductions.

Also accounted for in the originally-submitted and revised planning emissions inventories are several other CARB regulations that were adopted prior to development and/or adoption of the 70 ppb ozone plans. For some of these regulations adopted in the last 5 to 10 years, CARB has submitted them to U.S. EPA as revisions to the California SIP, but U.S. EPA has not yet taken action to approve them. These include the Small Off-Road Engines Regulation (as amended in 2021), the Ocean-Going Vessels At Berth Regulation (as amended in 2020), and several other regulations that account for smaller amounts of emissions reductions in future years.

Because regulations must be approved into the SIP for U.S. EPA to approve the SIP emissions inventories that rely upon them, it is possible that U.S. EPA's failure to act on the regulations will impact the approvability of the revised planning emissions inventories included in the 2026 Extreme Ozone SIP Revision. In order to alleviate this issue, this document proposes that the Board direct the Executive Officer to take appropriate action to resolve any completeness or approvability issues that may arise regarding the SIP submission, including to revise the commitment to use section 182(e)(5) of the Act to address any deficit in accounting for the reductions needed to demonstrate attainment, RFP, or other SIP elements.

## Reasonable Further Progress Demonstrations

Sections 172(c)(2) and 182(b)(1) of the Act require attainment plans to provide for RFP. RFP is defined in section 171(1) of the Act as "…such annual incremental reductions in emissions of the relevant air pollutant as are required…for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date." This requirement to demonstrate steady progress in emission reductions between the baseline year and attainment date ensures that areas will not delay implementation of control programs until immediately before the attainment deadline.

There are two separate progress requirements for the ozone nonattainment areas: a one-time requirement for a 15% reduction in ROG emissions over the first six years of the planning period; and an additional 3% per year reduction, averaged over each consecutive three-year period, of ozone precursor emissions until attainment. For all the areas in this report, U.S. EPA has previously approved a 15% ROG-only rate of progress demonstration. As such, the requirement to demonstrate a reduction in ROG of "at least 15% from baseline emissions" (section 182(b)(1)(A)(i)) for the first 6 years of the attainment planning period has been met.

As per the U.S. EPA, *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements* (Ozone Rule)[4] effective February 4, 2019, the 70 ppb ozone SIPs included a demonstration that the nonattainment areas achieved the required 18% reduction in ozone precursor emissions for the first six years of the attainment planning period, and an average emission reduction of 3% per year after that until the attainment date (section 182(c)(2)). The Ozone Rule also required that a baseline emissions inventory be used to demonstrate RFP, meaning that the emissions inventory used in the RFP demonstration only accounts for adopted regulations.

The attainment plans submitted in 2023 and 2024 for nonattainment areas in California included demonstrations that they met RFP for the 70 ppb ozone standard as required by the Act. However, with federal actions purporting to disapprove waivers and partially disapproving the SIP submittal of a regulation that provided reductions included in the submitted emissions inventories and RFP demonstrations, the 2026 Extreme Ozone SIP Revision includes revised RFP demonstrations for the 70 ppb ozone standard.

In addition to accounting for federal actions, the revised RFP demonstrations must also demonstrate that RFP is maintained when accounting for any differences between the updated planning emissions inventories and the updated MVEBs developed using EMFAC2021 (updates discussed in more detail below). As such, the revised RFP demonstrations include a line item that accounts for any increases in the

updated MVEBs compared to the updated planning emissions inventories used in the RFP demonstrations. In order to apply the most conservative test of the updates to the RFP demonstration, only increases in ROG and NOx associated with the updated MVEBs are included as a line item in the milestone years. As shown in Chapters 3, 4, and 5, all the areas continue to meet RFP when accounting for the adverse federal actions and with the adjustment for consistency with the updated MVEBs.

## Motor Vehicle Emissions Budgets

Section 176(c) of the Act establishes transportation conformity requirements, which are intended to ensure that transportation activities do not interfere with air quality progress. To accomplish this, the Act requires that transportation plans, programs, and projects that obtain federal funds or approvals be consistent with, or conform to, applicable SIPs before being approved by a Metropolitan Planning Organization (MPO). Conformity to the SIP means that proposed transportation activities must not:

1) Cause or contribute to any new violation of any standard,
2) Increase the frequency or severity of any existing violation of any standard in any area, or
3) Delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The portion of the total planning emissions inventory from on-road motor vehicles is used for transportation conformity purposes and is used to establish MVEBs.[5] MVEBs are submitted and approved into the SIP for the criteria pollutants and their precursors. For ozone plans, MVEBs are set for ROG and NOx emissions in future RFP milestone years and the attainment year. After MVEBs are approved by U.S. EPA as part of the plans, MPOs must demonstrate that emissions from new regional transportation plans (RTP) or federal transportation improvement programs (FTIP) do not exceed the MVEBs in the RFP milestone or attainment years.

The MVEBs included in the 70 ppb ozone plans submitted to U.S. EPA in 2023 and 2024 were developed using the California on-road motor vehicle emissions model EMFAC2017[6]. While EMFAC2017 did not include the benefits of ACT, Heavy-Duty Omnibus, Warranty Phase I, or Heavy-Duty I/M regulations in its baseline, these regulations were included in the emissions inventories and MVEBs through off-model factors. Due to federal actions purporting to disapprove previously-approved waivers and authorizations for the ACT, Heavy-Duty Omnibus, and Warranty Phase I regulations, and U.S. EPA's partial SIP disapproval of the Heavy-Duty I/M regulation,

[5] Federal transportation conformity regulations are found in 40 CFR Parts 51 and 93 – Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Titles 23 or 49 of the United States Code.

[6] *EMFAC2017 Model and Documentation | California Air Resources Board*

revised MVEBs are needed to account for these adverse federal actions and remove the emissions reduction benefits that U.S. EPA will no longer allow to be credited in the SIP.

In addition, CARB released an updated emission factor model (EMFAC2021) in 2021 to assess emissions from on-road motor vehicles, including cars, trucks, and buses in California. EMFAC2021 reflected the latest understanding of statewide and regional vehicle activities, emissions, and recently adopted regulations. Effective November 15, 2022, U.S. EPA approved EMFAC2021 and set a two-year regional emissions analysis grace period that provides time for CARB to revise previously approved plans with EMFAC2021, if needed, so that MPOs can incorporate revised SIP-approved MVEBs into the transportation conformity process. EMFAC2021 must, therefore, be used for all new regional emissions analyses for transportation conformity purposes that are started on or after November 15, 2024. For all these reasons, the 2026 Extreme Ozone SIP Revision includes revised MVEBs for each area, developed using EMFAC2021 and accounting for the recent adverse federal actions.

U.S. EPA's *Policy Guidance on the Use of MOVES4 for State Implementation Plan Development, Transportation Conformity, General Conformity, and Other Purposes*[7], requires that the states demonstrate that new MVEBs do not interfere with any applicable planning requirement of the Act, that is, RFP and the attainment demonstration. As discussed above, the RFP demonstrations for each area include a line item that accounts for any increases in the updated MVEBs compared to the updated planning emissions inventories used in the RFP demonstrations. Consistency with attainment demonstrations in the submitted plans are also analyzed to ensure the updated MVEBs do not interfere, as is discussed more below.

## Consistency with Attainment Demonstrations

In each chapter below for the specific nonattainment area, analysis shows that the revised MVEBs do not interfere with attainment. To demonstrate that the updated MVEBs developed using EMFAC2021 do not interfere with the attainment demonstration, staff compared the rate of on-road emission changes predicted from the base year for attainment modeling, 2018, to the attainment year, 2037, in the revised planning emissions inventories and the MVEBs developed using EMFAC2021. For consistency with the original emissions inventories and attainment demonstrations in the submitted plans, the on-road emissions in the revised planning inventories were developed using EMFAC2017; the revised planning inventories were only updated to account for recent federal actions by removing the emissions reduction benefits of regulations for which U.S. EPA will no longer allow areas to take credit in the SIP.

[7] *MOVES4 for State Implementation Plan Development*

Off-model adjustments to EMFAC2021 have also been developed to account for the adverse federal actions and reductions that cannot be credited. As such, the MVEBs developed using EMFAC2021 and the revised planning emissions inventories account for the same on-road vehicle regulations. Thus, a comparison of the on-road vehicle emissions from these sources demonstrates if the updated EMFAC model shows at least the same rate of change in emissions between the base year and the attainment year.

These analyses demonstrate for most cases that the level of on-road mobile emission reductions is maintained or increased with the EMFAC2021 emissions used in the revised MVEBs when compared to the level of on-road mobile emissions reductions in the revised planning inventories. Because the on-road mobile emissions in the revised planning inventories are based on EMFAC2017, they are consistent with the submitted attainment demonstrations and thus the updated MVEBs can be concluded to not interfere with the attainment demonstrations.

## Summary of Proposed Revisions

CARB staff is proposing the 2026 Extreme Ozone SIP Revision for Board consideration. The 2026 Extreme Ozone SIP Revision consists of:

- Revisions to specified 2022 State SIP Strategy measure write-ups and schedule for Board consideration;
- Revisions to CARB commitments to achieve specified emissions reductions by 2037, planning emissions inventories, reasonable further progress demonstrations, and associated motor vehicle emissions budgets for the South Coast, San Joaquin Valley, and Coachella Valley nonattainment areas for the 70 ppb ozone standard.

# Chapter 2: CARB Measure Commitment Revision

CARB is revising the 2022 State SIP Strategy commitments to ensure continued approvability of these commitments and the related attainment demonstrations for the South Coast, San Joaquin Valley, and Coachella Valley 70 ppb ozone nonattainment areas. This revision is necessary to reflect actions from the previous and current federal administration. The previous administration failed to act in a timely manner on regional SIPs, the 2022 State SIP Strategy, and California's request seeking waivers of federal preemption for some mobile source regulations identified as commitments in the 2022 State SIP Strategy. Due to the stated opposition of the incoming federal administration, CARB withdrew the still pending waiver requests in January 2026. The current federal administration subsequently illegally and unconstitutionally used congressional resolutions that purported to disapprove California waiver and authorization requests granted by U.S. EPA for six public health protective regulations as described in Chapter 1. The 2026 Extreme Ozone SIP Revision will ensure that CARB can continue to meet the 2022 State SIP Strategy commitments while avoiding onerous Clean Air Act sanctions in nonattainment areas across the State.

## Revised 2022 State SIP Strategy Commitment

The 2022 State SIP Strategy identified the control measures under State authority necessary to achieve the emission reductions toward attainment in nonattainment areas across California. Regional plans may contain enforceable commitments to achieve the level of emissions necessary to meet federal air quality standards, as identified by the attainment demonstration. The 2022 State SIP Strategy lists the CARB measures and quantifies potential emission reduction commitments for South Coast, San Joquin Valley, and Coachella Valley based on the measures identified. The Board adopted the 2022 State SIP Strategy and the measure schedule included therein which then formed the basis of the commitments for emission reductions by the attainment deadlines for each region that were adopted by the Board alongside the respective attainment plan. The commitments consist of two components:

1. A commitment to bring an item to the 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.

In the 2026 Extreme Ozone SIP Revision, CARB is revising the commitments for specified measures and nonattainment areas. As part of each attainment plan needing emission reductions from the State, the total aggregate emission reductions and the obligation to make certain proposals to the Board or take other actions within CARB's authority specified in the 2022 State SIP Strategy and the 2026 Extreme Ozone SIP Revision would become enforceable upon approval by U.S. EPA. While the 2022 State SIP Strategy and the 2026 Extreme Ozone SIP Revision discuss a range of

measures and actions, those measures and actions would still be subject to CARB's formal approval process and would not be final until the Board acts.

## CARB Commitment to Act on Measures

This section describes the proposed revisions to the list of measures and corresponding schedule commitment identified in the 2022 State SIP Strategy for the 70 ppb ozone standard. On September 22, 2022, the Board adopted the 2022 State SIP Strategy list of measures and corresponding schedule for all nonattainment areas in California. For each of the measures from the 2022 State SIP Strategy shown in Table 1, CARB committed to addressing each measure as described in that document. CARB is proposing revisions in Table 1 with underline to indicate additions and ~~strikethrough~~ to indicate deletions from the original 2022 State SIP Strategy text for the measure schedule. These changes reflect the updates necessary to account for adverse federal actions related to the In-Use Locomotive Regulation for which CARB withdrew the authorization request, the ACF Regulation for which the waiver was purportedly revoked, and the CHC Regulation for which CARB withdrew portions of the authorization requests, as well as other minor updates. The changes to emission reductions commitments associated with these regulations will be reflected in Chapters 3 through 5 for each nonattainment area.

**Table 1 – Revisions to CARB Measures and Schedule**

| Measure | Agency | Action | Implementation Begins |
|---|---|---|---|
| On-Road Heavy-Duty | | | |
| Advanced Clean Fleets Regulation | CARB | 2023 | 2024 |
| ~~Zero-Emissions~~ Drive Forward: Heavy-Duty Trucks Measure | CARB | 2028+ | 2030+ |
| Off-Road Equipment | | | |
| Commercial Harbor Craft | CARB | 2022 | 2023 |
| ~~Off-Road Zero-Emission Targeted Manufacturer Rule~~ Phased Advanced Clean Equipment Regulation | CARB | ~~2027~~ 2029 | 2031 |
| Other | | | |
| ~~Zero-Emission Standard for~~ Clean Space and Water Heater Standards | CARB | ~~2025~~ 2027 | 2030 |
| Primarily-Federally and Internationally Regulated Sources – CARB Measures | | | |
| ~~In-Use Locomotive Regulation~~ | ~~CARB~~ | ~~2023~~ | ~~2024~~ |

## State SIP Measures

This section reflects the proposed revisions to the measure write-ups for ACF, Drive Forward: Heavy-Duty Trucks, CHC, the Phased Advanced Clean Equipment Regulation, and Clean Space and Water Heater Standards as originally identified in the 2022 State SIP Strategies. The revised write-ups replace those originally included for specified measures in the 2022 State SIP Strategy; alternatively, an explanation is given describing why the measure write-up is not being updated.

## Advanced Clean Fleets Regulation

The ACF regulation was included as a measure commitment in the 2022 State SIP Strategy and adopted by CARB in April 2023. In November 2023, CARB submitted a request that U.S. EPA grant a waiver of preemption under section 209(b) of the Clean Air Act for the ACF on-road regulations and an authorization under section 209(e) of the Clean Air Act for the ACF off-road regulations. Because U.S. EPA failed to act on these requests and due to the stated opposition of the incoming federal administration, CARB submitted a letter on January 13, 2025, withdrawing its request for a waiver and authorization, pursuant to Clean Air Act 209(b) and (e), respectively, for its ACF regulation. On January 14, 2025, U.S. EPA sent a response letter to CARB acknowledging CARB's withdrawal of the request. Amendments to the ACF regulation were recently adopted, which would repeal parts of the regulation applying to federal or private fleets, including requirements for drayage trucks. The amendments are expected to be effective before January 2027. The state and local government fleets portion of ACF would remain, subject to amendments under AB 1594, which preserve CARB's authority to provide added flexibility for most public agency utilities.

Based on the withdrawal of the waiver and authorization requests and subsequent adopted amendments to the ACF regulation, CARB is proposing the following revision to the Proposed Action section below.

### Proposed Action

For this measure, CARB would phase in cleaner vehicle requirements for different fleets as follows:

State and Local Government fleets:

- State and local government fleets including cities, counties, special districts, and other municipalities are required to start incrementally adding cleaner vehicle technologies to their fleet starting in 2024. Public fleets that are based in designated low population counties would not be subject to these requirements until the 2030 timeframe.

## Drive Forward: Heavy-Duty Trucks

Drive Forward: Heavy-Duty Trucks (previously known as the Zero-Emissions Trucks Measure) was included as a measure commitment in the 2022 State SIP Strategy. CARB is proposing the following revision.

### Overview

This measure would affect medium and heavy-duty vehicles, including heavier pick-up trucks and walk-in vans, as well as a wide range of vocational, drayage, and line-haul trucks (big-rig trucks), as well as buses. NOx emissions from medium- and heavy-duty vehicles are currently the largest source of on-

road mobile source emissions and will remain a major portion of pollution in the future. This sector has a population of 2 million vehicles, making up 7% of the State's vehicle population, but representing 60% of on-road transportation NOx emissions. Communities near major freight trucking hubs such as seaports, railyards, warehouses are disproportionally burdened by the cumulative health impacts from these activities.

**Proposed Action**

New measures would be undertaken to reduce emissions from this sector in a manner that is economically feasible. Staff would implement regulatory strategies to achieve the goal of cleaner lower emission trucks through a potential combination of manufacturer-focused and fleet concepts.

Such strategies could include:

- Cleaner new engine certification standards similar to the federal Clean Trucks Plan NOx rule
- Revising vehicle engine and vehicle standards in ways to encourage early action to achieve emission reductions through adoption of the cleanest technologies
- Development of new methods for reducing real-world emissions to maintain emissions reductions throughout a vehicle's lifetime.
- Accelerated turnover of in-use vehicles to cleaner technologies at the end of their useful life
- Establishing regions/zones where the cleanest vehicle technologies are used

These measures would potentially start to be heard by the Board beginning in the 2028 timeframe and would be a significant step in the comprehensive strategy to maximize emissions reductions from medium- and heavy-duty vehicles where feasible.

**Timing**:

Proposed CARB Board Hearing: 2028+
Proposed Implementation Begins: 2030+

## Amendments to the Commercial Harbor Craft Regulation

The CHC Regulation was included as a measure commitment in the 2022 State SIP Strategy and adopted by CARB in March 2022. In January 2023, CARB submitted a request that U.S. EPA grant an authorization under section 209(e) of the Clean Air Act for the CHC Regulation. On January 6, 2025, U.S. EPA granted California authorization of most elements of its CHC Regulation. In its action, U.S. EPA did not take action on the authorization request with respect to two elements of the CHC Regulation for in-use engines and vessels: a) the zero-emission and advanced technologies (ZEAT) standards for in-use short-run ferries and b) the emissions

"standards for in-use engines and vessels (excluding commercial fishing vessels) that would apply after the expiration of the feasibility extensions" specifically for the Feasibility Extension E3. Due to the stated opposition of the incoming federal administration, CARB submitted a letter on January 13, 2025, withdrawing its request for authorization of those two elements of the CHC Regulation. On January 14, 2025, U.S. EPA submitted a response letter to CARB acknowledging CARB's partial withdrawal of the request. Based on U.S. EPA's partial authorization, CARB is proposing the following revisions to the Proposed Action section below.

**Proposed Action**

The Commercial Harbor Craft Amendments were adopted by the Board in March 2022 and include the following approved requirements of the CHC regulation:

- Starting in 2023 and phasing in through 2031, most CHC (except for commercial fishing vessels and categories listed below) are required to meet the cleanest possible standard, equivalent to a Tier 3 or 4 with a diesel particulate filter (DPF) based on a compliance schedule. The previously regulated CHC categories are ferries, excursion, crew and supply, tug/tow boats, barges, and dredges. The amendments impose the cleanest performance standards on the previously regulated CHC categories as well as most of the remaining vessel categories, including workboats, pilot vessels, commercial passenger fishing, and all barges over 400 feet in length or otherwise meeting the definition of an ocean-going vessel. The amendments also remove the previous exemption for engines less than 50 horsepower;
- Starting in 2025, all new excursion vessels are required to be zero-emission capable hybrid vessels that are capable of deriving 30% or more of combined propulsion and auxiliary power from a zero-emission tailpipe emission source;
- Starting in 2026, in use short-run ferries, all diesel engines must be Tier 3 or 4. Also starting in 2026, all new short run ferries are required to be zero-emission.
- Starting in 2030 and 2032, all engines on commercial fishing vessels need to meet Tier 3 standards if they did not meet Tier 2 or greater standards by January 1, 2023.

## Phased Advanced Clean Equipment Regulation

Phased Advanced Clean Equipment Regulation (previously known as the Zero-Targeted Manufacturer Rule) was included as a measure commitment in the 2022 State SIP Strategy. CARB is proposing the following revision.

### Overview

Existing off-road zero-emission regulations and regulations currently under development target a variety of sectors (e.g., forklifts, cargo handling equipment, off-road fleets, small off-road engines, etc.). However, as technology progresses, the advancement of cleaner equipment in more sectors, including wheel loaders, excavators, and portable generators, could be accelerated through this measure.

### Proposed Action

The goal of the Off-Road Phased Advanced Clean Equipment Rule is to achieve criteria pollutant reductions by accelerating the development, production, and deployment of cleaner off-road equipment and powertrains.

### Estimated Emissions Reductions

CARB will quantify emissions reductions from this measure during the program development process.

### Timing

Proposed CARB Board hearing: 2029
Proposed implementation begins: 2031

## Clean Space and Water Heater Standards

Clean Space and Water Heater Standards (previously known as the Zero-Emissions Standards for Space and Water Heaters) was included as a measure commitment in the 2022 State SIP Strategy. CARB is proposing the following revision.

### Overview

The primary goal of this measure is to reduce criteria pollutant emissions from new residential and commercial space and water heaters sold in California. Even with low NOx emission limits in place in nine air districts in California, NOx emissions from natural gas combustion in residential and commercial buildings are projected to total 37.7 tpd NOx in the year 2030 and 36.2 tpd NOx in the year 2037. CARB would set sales standards for emissive and zero-emission space and water heaters to go into effect in 2030. Through meaningful engagement with communities and the process outlined below, CARB would adopt statewide standards which would have criteria pollutant benefits as a key result. Beginning in 2030, a phased sales schedule would take effect, requiring an increasing percentage of new space heaters and water heaters to comply with the emission standards. CARB would design such standards in collaboration with energy and building code regulators, and with air districts, to ensure it was consistent with all state and local efforts, and would work carefully with communities to consider any housing cost or affordability impacts, recognizing that reducing emissions from space and

water heaters can generate health benefits and cost-savings with properly designed standards.

CARB intends this measure to be part of a suite of complementary building decarbonization policies deeply informed by public process that will consider affordability and accessibility. Although this measure is the only component appropriate for including in the SIP, before setting the emission standards, CARB will work in collaboration with other agencies, industry, environmental stakeholders, and community representatives to ensure that the measure is developed and implemented in an equitable manner to benefit low-income and disadvantaged communities. As such, community engagement will be a critical aspect of the entire process.

**Proposed Action**

For this measure, CARB would develop and propose emission standards for space and water heaters sold in California. This proposed measure is a key component of a broader portfolio of strategies to advance equitable building decarbonization in California.

This measure would not mandate retrofits in existing buildings, but some buildings may require retrofits to be able to use the new technology that this measure would require. Beginning in 2030, a phased schedule would take effect, requiring new space and water heaters (for either new construction or replacement of burned-out equipment in existing buildings) sold in California to meet the emission standards. It is expected that this regulation would rely heavily on heat pump technologies currently being sold to electrify new and existing buildings. In addition to the development processes for the 2022 State SIP Strategy and the 2026 Extreme Ozone SIP Revision, the measure as proposed by staff or adopted by the Board will be subject to a full public process.

**Timing**

Proposed CARB Board hearing: 2027
Proposed implementation begins: 2030

## In-Use Locomotive Regulation

The In-Use Locomotive Regulation was included as a measure commitment in the 2022 State SIP Strategy and adopted by CARB in April 2023. In November 2023, CARB submitted a request that U.S. EPA grant an authorization under section 209(e) of the Clean Air Act. Due to the stated opposition of the incoming federal administration, CARB submitted a letter on January 13, 2025, withdrawing its request for authorization. On January 14, 2025, U.S. EPA sent a response letter to CARB acknowledging CARB's withdrawal of the request.

On June 26, 2025, CARB repealed the In-Use Locomotive Regulation. This repeal removes all the In-Use Locomotive Regulation requirements for all locomotive operators.

# Chapter 3: South Coast Air Basin

This chapter proposes revisions to the State emission reduction commitments to support U.S. EPA approval of the South Coast Air Basin (South Coast) attainment plan for the 70 ppb ozone standard in the aftermath of the unprecedented federal actions targeting CARB programs. This revision also updates additional SIP elements originally included in the *2022 Air Quality Management Plan for the 70 parts per billion 8-hour ozone Standard in the South Coast Air Basin and Coachella Valley* (2022 South Coast AQMP) for the South Coast.

Effective August 3, 2018, U.S. EPA designated the South Coast as nonattainment area for the 70 ppb ozone standard and classified the area as Extreme with an August 3, 2038, attainment date[8]. The South Coast Air Quality Management District (South Coast AQMD), in coordination with CARB staff, prepared the 2022 South Coast AQMP to fulfill the requirements of the Clean Air Act (Act) as applicable for South Coast, including to demonstrate the area will attain this standard by the end of 2037, the last full ozone season prior to the attainment date. The South Coast AQMD adopted the 2022 South Coast AQMP on December 2, 2022, and submitted the plan to CARB on December 13, 2022. CARB adopted the 2022 South Coast AQMP on January 26, 2023, and submitted it to U.S. EPA as revisions to the California SIP on February 22, 2023. The 2022 South Coast AQMP addressed SIP requirements of the Act including an attainment demonstration incorporating the South Coast AQMD and CARB emission reduction commitments, planning emissions inventories, and a RFP demonstration with associated MVEBs for the milestone and attainment years.

As discussed in a previous chapter, lack of action by the previous federal administration on the 2022 South Coast AQMP and the 2022 State SIP Strategy submittals, coupled with recent adverse federal actions concerning CARB's authority to enforce its mobile source regulations relied upon in these plans, means that CARB must update the State commitments to support the attainment demonstration in the South Coast. The 2026 Extreme Ozone SIP Revision ensures that CARB can continue to meet the State commitments while supporting the South Coast's progress toward attaining the 70 ppb ozone standard in 2037.

In addition to updating the CARB commitments relevant to the South Coast, CARB is also revising the planning emissions inventories in the 2022 South Coast AQMP to reflect federal actions affecting regulations originally included in the emissions inventories and providing emissions reductions in the milestone years. CARB is also revising the RFP demonstration in the 2022 South Coast AQMP to reflect the revisions to the planning emissions inventories. Further, the MVEBs are being revised in the milestone years to align with EMFAC2021 and to account for the federal actions;

[8] 83 FR 25776, Posted June 4, 2018 and effective August 3, 2018, "Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards", *https://www.govinfo.gov/content/pkg/FR-2018-06- 04/pdf/2018-11838.pdf*

updated MVEBs are needed to replace the MVEBs submitted as a part of the 2022 South Coast AQMP which were developed using EMFAC2017. In accordance with U.S. EPA rules and guidance on transportation conformity, this report demonstrates that the updated MVEBs do not interfere with the updated RFP demonstration and the attainment demonstration submitted in the 2022 South Coast AQMP.

## CARB Commitment to Achieve Emission Reductions

This section describes the proposed revision to the CARB emission reductions commitment from the SIP measures identified and quantified for the South Coast. The 2022 South Coast AQMP, and the 2022 State SIP Strategy as adopted by CARB in 2023 included estimates of the emission reductions from each of the individual new State measures. CARB's overall commitment, as the designated air pollution control agency under federal law for the State of California, is to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard, reflecting the combined reductions from the existing control measures not yet accounted for in emissions inventories and new measures.

Section 182(e)(5) of the Clean Air Act provides additional flexibility to nonattainment areas that are classified as Extreme for ozone and allows these areas to include commitments for emission reductions to come from future control techniques and technologies. Commitments from future control techniques and technologies are allowed under section 182(e)(5) because Extreme ozone nonattainment areas, such as the South Coast, have 20 years after designations to attain the ozone standard and, in that time, advanced technologies may become available.

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorization requests previously granted by U.S. EPA under section 209 of the Act. These actions targeted six public health protective regulations: Advanced Clean Trucks (ACT), Zero-Emission Airport Shuttle, Zero-Emission Powertrain Certification, Heavy-Duty Warranty Phase 1, Heavy-Duty Omnibus, and ACC II. California disagrees with these unconstitutional and illegal actions targeting these six regulations and awaits the outcome of the relevant pending lawsuits challenging them.

That said, to support approval of the attainment plans, the 2026 Extreme Ozone SIP Revision proposes to revise a portion of CARB's aggregate commitment for the South Coast in 2037 for emission reductions that were originally associated with the ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1, Heavy-Duty I/M, ACC II, In-Use Locomotive, and CHC Regulations to remove attribution of reductions to those regulations (or portions thereof) and now requests U.S. EPA approval of the corresponding commitments to reduce emissions under the provisions of 182(e)(5) of the Clean Air Act.

The tables in this section reflect the proposed revisions to the commitment to achieve emissions reductions as originally identified in the 2016 and 2022 State SIP Strategies

and provide detail on to what extent emissions reductions previously associated with individual measures are now proposed to be reallocated to commitments under 182(e)(5). The proposed updates are underlined to indicate additions and ~~strikethrough~~ to indicate deletions from the existing text.

The 2022 South Coast AQMP used photochemical modeling to demonstrate that the control strategy would provide the level of emissions reductions necessary to bring the South Coast into attainment for the 70 ppb ozone standard by 2037, the attainment year for Extreme nonattainment areas. The attainment demonstration for the South Coast included the benefits of CARB's existing mobile source control program and District regulations. The attainment demonstration further included emissions reductions from CARB commitments defined in its 2022 State SIP Strategy. CARB's overall commitment in the 2022 State SIP Strategy is to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard in the South Coast. The total emissions reductions accounted for in the attainment demonstration, between those accounted for in the emissions inventories and from CARB commitments, is maintained for the South Coast.

Table 2 summarizes the updated emissions reductions from CARB's current control program and CARB's proposed emissions reduction commitment that, collectively, provide the emissions reductions needed to support attainment of the 70 ppb ozone standard in the South Coast. The proposed commitment includes reductions from the 2016 State SIP Strategy measures still in place, reductions from measures in the 2022 State SIP Strategy still in place, and reductions now proposed for approval under section 182(e)(5) future control techniques and technologies provisions of the Clean Air Act. Table 3, Table 4, and Table 5 provide additional detail on the updated estimates and proposed emission reduction commitments.

**Table 2 – South Coast NOx Emission Reductions from CARB Programs**

| CARB Programs in South Coast | 2037 NOx Emission Reductions (tpd) |
|---|---|
| Current Control Program | ~~166.4~~ 155.2 |
| Potential CARB Emission Reductions Commitments | ~~95.7~~ 106.8 |
| 2016 State SIP Strategy Measures (Not yet in baseline inventory) | ~~6.4~~ 1.0 |
| 2022 State SIP Strategy Measures | ~~89.3~~ 79.0 |
| Newly allocated to Clean Air Act Section 182(e)(5) | 26.7 |
| Total Reductions | 262.1 |

Note: numbers may not add up due to rounding

As described earlier, while most of the 2016 State SIP Strategy measure commitments had been adopted at the time of 2022 State SIP Strategy development, there were three 2016 State SIP Strategy measure commitments not yet adopted or accounted for in the baseline inventory including regulations for light-duty passenger vehicles, transport refrigeration units, and forklifts. To ensure these remaining three 2016 State SIP Strategy measure commitments were accounted for, the 2022 State SIP Strategy

identified them as measures that would provide emissions reductions to be accounted for in the aggregate emissions reduction commitments. Table 3 reflects the original emission reduction estimates for these 2016 State SIP Strategy measures in the 2022 State SIP Strategy and the proposed updates to the emission reduction commitment.

**Table 3 – South Coast Emission Reductions from Remaining 2016 State SIP Strategy**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Cars II[9] | ~~5.0~~ 0.0 | ~~3.8~~ 0.0 |
| Transport Refrigeration Unit Part I[10] | ~~0.5~~ <0.1 | ~~0.4~~ 0.3 |
| Zero-Emission Forklift | 0.9 | 0.1 |
| Total | ~~6.4~~ 1.0 | ~~4.4~~ 0.4 |

Table 4 reflects the original emission reduction estimates for the CARB measure commitments in the 2022 State SIP Strategy and the proposed updates to the emissions reduction commitment. The updates are for tonnage previously associated with the ACF Regulation, Drive Forward: Heavy-Duty Trucks Measure (previously known as the Zero-Emission Trucks Measure), Transport Refrigeration Unit Regulation Part 2, Commercial Harbor Craft Amendments, and In-Use Locomotive Regulation.

[9] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[10] CARB continues to implement and enforce the portion of this regulation for which U.S. EPA granted the authorization, while the remaining 0.4 tpd NOx and <0.1 tpd ROG emissions reductions previously associated with this measure will now be associated with the Transport Refrigeration Unit Regulation Part 2.

**Table 4 – South Coast Expected Emission Reductions from the 2022 State SIP Strategy**

| Proposed Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| On-Road Heavy-Duty | | |
| Advanced Clean Fleets Regulation[11] | ~~6.6~~ 0.3 | ~~0.5~~ <0.1 |
| ~~Zero-Emissions~~ Drive Forward: Heavy-Duty Trucks Measure[12] | ~~4.1~~ 10.5 | ~~0.4~~ 1.0 |
| Total On-Road Heavy-Duty Reductions | ~~10.7~~ 10.9 | ~~0.9~~ 1.1 |
| On-Road Light-Duty | | |
| On-Road Motorcycle New Emissions Standards | 0.8 | 2.1 |
| Clean Miles Standard | <0.1 | <0.1 |
| Total On-Road Light-Duty Reductions | 0.8 | 2.1 |
| Off-Road Equipment | | |
| Tier 5 Off-Road Vehicles and Equipment | 2.7 | NYQ |
| Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation | 1.0 | 0.1 |
| Transport Refrigeration Unit Measure ~~Regulation~~ Part 2[13] | ~~5.0~~ 5.4 | 0.7 |
| Commercial Harbor Craft Amendments[14] | 2.6 | 0.2 |
| Cargo Handling Equipment Amendments | 0.6 | 0.4 |
| ~~Off-Road Zero-Emission Targeted Manufacturer Rule~~ Phased Advanced Clean Equipment Regulation | NYQ[15] | NYQ |
| Clean Off-Road Fleet Recognition Program | NYQ | NYQ |
| Spark-Ignition Marine Engine Standards | 0.3 | 0.7 |
| Total Off-Road Equipment Reductions | ~~12.2~~ 12.6 | ~~2.0~~ 2.1 |
| Other | | |
| Consumer Products Standards | - | 8 |
| ~~Zero-Emission Standard for~~ Clean Space and Water Heaters ~~Standards~~ | 3.2 | 0.5 |
| Enhanced Regional Emission Analysis in State Implementation Plans | NYQ | NYQ |
| Pesticides: 1,3-Dichloropropene Health Risk Mitigation | - | NYQ |
| Total Other Reductions | 3.2 | 8.5 |
| Primarily-Federally and Internationally Regulated Sources – CARB Measures | | |
| ~~In-Use Locomotive Regulation~~[16] | ~~10.9~~ 0.0 | ~~0.4~~ 0.0 |
| Future Measures for Aviation Emission Reductions | NYQ | NYQ |
| Future Measures for Ocean-Going Vessel Emission Reductions | NYQ | NYQ |

[11] CARB continues to implement and enforce the portion of this regulation applicable to State and Local Fleets, as amended by CARB in September 2025, while the remaining 6.2 tpd NOx and 0.4 tpd ROG emissions reductions previously associated with this measure are now associated with the Drive Forward: Heavy-Duty Trucks Measure under development.

[12] An additional 6.2 tpd of NOx and 0.4 tpd ROG emissions reductions are now associated with this measure due to changes from the Advanced Clean Fleets Regulation.

[13] An additional 0.4 tpd of NOx and <0.1 tpd ROG emissions reductions are now associated with this measure due to changes from the Transport Refrigeration Unit Part 1.

[14] CARB continues to implement and enforce the portion of this regulation for which U.S. EPA granted the authorization, thus this remains 2.6 tpd NOx 0.2 tpd ROG.

[15] NYQ means not yet quantified.

[16] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

| Proposed Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Total Primarily-Federally and Internationally Regulated Sources – CARB Measures Reductions | ~~10.9~~ NYQ | ~~0.4~~ NYQ |
| Primarily-Federally and Internationally Regulated Sources – Federal Action Needed | | |
| On-Road Heavy-Duty Vehicle Low-NOx Engine Standards | 3.8 | <0.1 |
| On-Road Heavy-Duty Vehicle Zero-Emission Requirements | NYQ | NYQ |
| Off-Road Equipment Tier 5 Standard for Preempted Engines | 1.6 | NYQ |
| Off-Road Equipment Zero-Emission Standards Where Feasible | 2.2 | NYQ |
| More Stringent Aviation Engine Standards | NYQ | NYQ |
| Cleaner Fuel and Visit Requirements for Aviation | 10.2 | NYQ |
| Zero-Emission On-Ground Operation Requirements at Airports | NYQ | NYQ |
| Airport Aviation Emissions Cap | 9.2 | NYQ |
| More Stringent National Locomotive Emission Standards | NYQ | NYQ |
| Zero-Emission Standards for Locomotives | NYQ | NYQ |
| Address Unlimited Locomotives Remanufacturing | NYQ | NYQ |
| More Stringent NOx and PM Standards for Ocean-Going Vessels | 0.8 | NYQ |
| Cleaner Fuel and Vessel Requirements for Ocean-Going Vessels | 23.7 | NYQ |
| Total Primarily-Federally and Internationally Regulated -Federal Action Needed Reductions | 51.5 | <0.1 |
| **Aggregate Emission Reductions** | **~~89.3~~ 79.0** | **~~13.9~~ 13.7** |

Note: numbers may not add up due to rounding

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorizations previously-granted by U.S. EPA under section 209 of the Act for six CARB regulations. Additionally, U.S. EPA took final action in January 2026 to partially approve and partially disapprove CARB's SIP submittal of the Heavy-Duty I/M regulation. Specifically, the partial disapproval is limited to SIP inclusion of portions of the regulation that address emissions in California from out-of-state and out-of-country registered vehicles. This partial disapproval does not impact CARB's ability to fully enforce and implement the Heavy-Duty I/M regulation. However, the partial disapproval further undermines CARB's ability to meet its SIP measure and emission reduction commitments because CARB cannot take SIP credit for the emission reductions from the parts of the regulation not added to the SIP.

Of the regulations affected by the adverse federal actions, ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1 and Heavy-Duty I/M were originally accounted for in the baseline emissions inventories at the time of development of the 2022 State SIP Strategy and the 2022 South Coast AQMP. Table 5 summarizes the emissions reductions originally associated with these programs, which have now been removed from the planning emissions inventories and for which CARB staff is proposing to be reallocated to commitments under 182(e)(5).

**Table 5 - South Coast Emission Reductions from Regulations Removed from the Planning Emissions Inventory**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Trucks Regulation, Heavy-Duty Low-NOx Omnibus Regulation, Heavy-Duty Warranty Phase 1[17] | 10.4 | 0.2 |
| Heavy-Duty Inspection and Maintenance[18] | 0.3 | <0.1 |
| Total | 10.8 | 0.2 |

While this revision includes estimates of the emissions reductions from individual measures, CARB's overall commitment is to achieve the total emissions reductions necessary from sources in California to attain the federal air quality standards. Therefore, if a particular measure does not achieve its expected emission reductions, the State's overall commitment to achieving the total aggregate emission reductions still exists. If actual emission decreases occur that are larger than the projections reflected in the current emission inventory and the 2022 State SIP Strategy, CARB will submit an updated emissions inventory to U.S. EPA as part of a SIP revision. A new 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.

## Planning Emissions Inventories

U.S. EPA guidance requires that planning emissions inventories submitted with attainment plans are consistent with the baseline year and milestone years within the RFP demonstration. For the planning emissions inventory for the South Coast 70 ppb ozone standard, baseline emissions inventories were developed using CARB's 2022 California Emissions Projection Analysis Model (CEPAM2022) Emission Projections, Version 1.01[19].

CEPAM2022 v1.01 used 2018, the year U.S. EPA designated the South Coast as nonattainment, as the base year inventory; inventories for other years are back-cast or forecast from that base year inventory. The on-road motor vehicle emissions in the emissions inventories were generated using CARB's mobile source emissions model, EMFAC2017. On-road motor vehicle activity data reflect projections provided by the

[17] For reductions previously associated with these measures, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[18] CARB continues to fully implement and enforce the Heavy-Duty I/M regulation, but for the emissions reductions associated with the portion of the regulation that U.S. EPA did not approve into the SIP, CARB requests U.S. EP approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[19] *Appendix A South Coast and Coachella Valley Planning Emissions Inventories*

Southern California Association of Governments (SCAG) from their adopted 2020 Regional Transportation Plan/Sustainable Communities Strategy[20] (RTP/SCS). Off-road mobile source emissions were generated using CARB's OFFROAD model.

Consistent with U.S. EPA guidance requiring the RFP baseline year to be the year of the most recently available triennial National Emissions Inventory, a 2017 baseline year was used for demonstrating RFP. U.S. EPA guidance requires that inventories be developed and submitted for years that are consistent with the baseline year, 2017, and milestone years needed for the RFP demonstration[21]. The future year planning inventories needed for the RFP demonstration in the CARB staff report submitted to U.S. EPA with the 2022 South Coast AQMP, *CARB Review of the 2022 Air Quality Management Plan for the 70 parts per billion 8-hour Ozone Standard in the South Coast Air Basin and Coachella Valley*, (CARB Staff Report on the 2022 South Coast AQMP) were 2023, 2026, 2029, 2032, 2035 and 2037.

Planning emissions inventories account for rules and regulations as adopted and in place at the time of development; for CEPAM2022 Version 1.01, this included CARB's ACT, Heavy-Duty Omnibus, Warranty Phase I, and Heavy-Duty I/M regulations. Due to federal actions purporting to disapprove previously-approved waivers and authorizations for the ACT, Heavy-Duty Omnibus, and Warranty Phase I regulations, and U.S. EPA's partial SIP disapproval of the Heavy-Duty I/M regulation, a revised planning emissions inventory is required for the 70 ppb ozone standard.

CARB staff developed a revised version of CEPAM2022 Version 1.01 that removes the emissions reductions benefits of the regulations affected by the adverse federal actions (ACT, Heavy-Duty Omnibus, Warranty Phase I, and the portion of the Heavy-Duty I/M regulation applicable to out-of-state or out-of-country registered vehicles) which U.S. EPA will no longer allow be credited in the SIP. Aside from removal of the emissions benefits of these regulations, this planning emissions inventory is nearly identical to the one originally included in Appendix A[22] of the CARB Staff Report on the 2022 South Coast AQMP; other minor differences are seen due to updated processing within the CEPAM model.

It should be noted also that since the implementation of the effected regulations did not begin until after 2017, the revised 2017 planning emission inventories are identical to those in the CARB Staff Report on the 2022 South Coast AQMP. The revised planning emissions inventory for the South Coast as applicable for the 70 ppb ozone standard is summarized in Table 6. More detail can be found in Appendix A.

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[20] *SCAG Connect SoCal*

[21] *eCFR :: 40 CFR 51.1310 -- Requirements for reasonable further progress (RFP).*

[22] *Appendix A South Coast and Coachella Valley Planning Emissions Inventories*

**Table 6 - Revised South Coast Planning Emissions Inventory**
(summer planning inventory out to 3 nautical miles, tpd)

| | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| **ROG** | | | | | | | |
| **Stationary and Area-wide** | 213.90 | 223.87 | 229.87 | 234.93 | 240.32 | 245.31 | 248.87 |
| **On-Road Motor Vehicles*** | 88.90 | 57.90 | 50.69 | 45.83 | 41.22 | 37.71 | 36.12 |
| **Off-Road Vehicles and Equipment** | 109.84 | 95.89 | 84.08 | 71.20 | 62.54 | 56.35 | 52.95 |
| **Total Emissions** | 412.65 | 378.09 | 364.64 | 351.96 | 344.08 | 339.36 | 337.94 |
| **NOx** | | | | | | | |
| **Stationary and Area-wide** | 51.77 | 47.55 | 45.15 | 43.18 | 42.14 | 41.44 | 41.34 |
| **On-Road Motor Vehicles*** | 169.93 | 83.88 | 64.53 | 56.51 | 51.46 | 48.61 | 47.74 |
| **Off-Road Vehicles and Equipment** | 126.60 | 93.67 | 90.05 | 88.45 | 87.98 | 85.88 | 83.12 |
| **Total Emissions** | 348.30 | 225.10 | 199.73 | 188.15 | 181.58 | 175.94 | 172.19 |

*On-Road emission inventory developed using EMFAC2017
Source: CEPAM2022v1.01 ("revised" 2026)

## Reasonable Further Progress Demonstration

With the revision to the planning emissions inventories for the 2022 South Coast AQMP, a revised RFP demonstration is also needed. The new RFP demonstration must use the revised planning emissions inventory in order to account for the adverse federal actions and also demonstrate that RFP is maintained when accounting for any differences between the updated planning emissions inventories and the updated MVEBs developed using EMFAC2021 (updates discussed in more detail below); to do this, the revised RFP demonstration includes an adjustment to account for the changes to on-road emissions predicted by the new transportation model, EMFAC2021. To be conservative in the adjustment regarding the use of the EMFAC2021 transportation model, only increases in the differences between EMFAC2017 and EMFAC2021 are included in the RFP demonstration below.

The revised RFP demonstration for the 70 ppb ozone standard in Table 7 uses the CEPAM2022 v1.01 ("revised" 2026) planning emissions discussed above and applies a line item adjustment. The adjustment is to demonstrate RFP is maintained with the revised MVEBs and accounts for emissions increases, if any, resulting from the updated MVEBs based on the newer transportation model, EMFAC2021.

**Table 7 - Revised South Coast RFP Demonstration**
(summer planning inventory, tpd)

| Year | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ROG emissions | 412.65 | 378.09 | 364.64 | 351.96 | 344.08 | 339.36 | 337.94 |
| EMFAC2021 adjustment | | 0.00 | 3.31 | 1.17 | 1.78 | 1.29 | 1.88 |
| Adjusted Baseline ROG | 412.65 | 378.09 | 367.95 | 353.13 | 345.86 | 340.66 | 339.81 |
| Required % change since 2017 | | 18% | 27% | 36% | 45% | 54% | 60% |
| Target ROG Level | | 338.37 | 301.23 | 264.09 | 226.96 | 189.82 | 165.06 |
| Shortfall (-)/ Surplus (+) in ROG | | -39.72 | -66.72 | -89.03 | -118.90 | -150.84 | -174.75 |
| Shortfall (-)/ Surplus (+) in ROG, % | | -10% | -16% | -22% | -29% | -37% | -42% |
| Year | 2017 | 2026 | 2026 | 2029 | 2032 | 2035 | 2037 |
| NOx emissions | 348.30 | 225.10 | 199.73 | 188.15 | 181.58 | 175.93 | 172.19 |
| EMFAC2021 adjustment | | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted Baseline NOx | | 225.10 | 199.73 | 188.15 | 181.58 | 175.93 | 172.19 |
| Change in NOx since 2017 | | 123.20 | 148.56 | 160.15 | 166.72 | 172.36 | 176.10 |
| Change in NOx since 2017, % | | 35% | 43% | 46% | 48% | 49% | 51% |
| NOx reductions since 2017 used for ROG substitution in this milestone year, % | | 10% | 16% | 22% | 29% | 37% | 42% |
| NOx reductions since 2017 surplus after meeting ROG substitution needs in this milestone year, % | | 26% | 26% | 24% | 19% | 13% | 8% |
| RFP shortfall (-), if any | | 0% | 0% | 0% | 0% | 0% | 0% |
| RFP Met? | | YES | YES | YES | YES | YES | YES |

Note: numbers may not add up due to rounding

Table 7 demonstrates that ROG and NOx emission reductions in the revised planning emissions inventories meet the RFP targets for the 70 ppb ozone standard in the 2023, 2026, 2029, 2032, and 2035 milestone years and in the 2037 attainment year. In addition, Table 7 demonstrates consistency between the RFP and EMFAC2021 by including a line-item adjustment to account for the differences in the on-road mobile source emissions projections in the CEPAM inventory and the MVEBs which are rounded up to the nearest ton per day (see below for more information on the MVEBs).

## Motor Vehicle Emissions Budgets

As discussed in Chapter 1, the portion of the total emissions inventory attributable to on-road motor vehicles is identified by the Act for transportation conformity purposes

and referred to as MVEB[23]. Section 176(c) of the Act establishes transportation conformity requirements using MVEBs to ensure that transportation activities do not interfere with a region's air quality progress.

SCAG prepares a long-range RTP at least every four years, and a short-range funding program, or Regional Transportation Improvement Program (RTIP), every two years. Before adopting the RTP or RTIP, SCAG prepares a regional emissions analysis using the proposed plan and program as specified in the federal conformity regulation[24] and compares those emissions to the MVEBs in the SIP. SCAG may determine that the RTP/RTIP conforms if the emissions from the proposed actions are less than the MVEBs approved in the SIP. The conformity determination also signifies that the MPO has met other transportation conformity requirements, such as interagency consultation and financial constraint.

The CARB Staff Report on the 2022 South Coast AQMP established MVEBs for ROG and NOx emissions in the 70 ppb ozone milestone years using emission rates from EMFAC2017 and activity data (vehicle miles traveled [VMT] and speed distributions) from SCAG 2020 RTP/SCS[25]. The MVEBs were consistent with the emission inventory and control measures in the 2022 South Coast AQMP. They included reductions from recently adopted regulations in all milestone years, as well as commitments for additional regulations in the attainment year. See Appendix VI-C of the 2022 South Coast AQMP for additional details[26].

With the revision to the baseline emissions inventory to remove the emission reductions from several on-road mobile source regulations resulting from federal actions, the MVEBs in the South Coast for the 70 ppb ozone standard must also be revised. In addition to revising the MVEBs to account for the federal actions, the revised MVEBs must also use the latest motor vehicle emissions model, EMFAC2021, which was approved [27] on November 15, 2022, and is now required to be used for all conformity purposes, as well as the latest activity data approved by SCAG.

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[23] Federal transportation conformity regulations are found in 40 CFR Parts 51 and 93 – Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Titles 23 or 49 of the United States Code.

[24] 40 CFR Parts 51 and 93, *eCFR :: 40 CFR Part 93 -- Determining Conformity*

[25] *SCAG Connect SoCal 2020 RTP/SCS*

[26] *2022 South Coast AQMP, appendix-vi.*

[27] EMFAC emissions model, *MSEI - On-Road Documentation | California Air Resources Board*

The MVEBs in Table 8 were developed for a summer average day consistent with the revised RFP demonstration and the 2022 South Coast AQMP attainment demonstration, using the following methodology:

1) Used the EMFAC2021 model to produce the on-road motor vehicle emissions (average summer day) for the appropriate pollutants (ROG and NOx) using SCAG 2025 FTIP (2024 RTP equivalent) data;
2) Applied the Off-Model Adjustment Factors to reflect the illegal federal actions purporting to disapprove the Clean Air Act waivers for the ACT and Omnibus regulations and accounting for only the SIP-approved portion of the Heavy-Duty I/M Regulation; and
3) Rounding up the totals for ROG and NOx to the nearest ton.

**Table 8 - Revised South Coast MVEBs**
(summer planning inventory, tpd)

| | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 53.24 | 65.56 | 46.89 | 56.27 | 42.18 | 49.13 | 38.37 | 43.92 | 37.00 | 41.59 |
| **Reductions removed from affected regulations[a]** | 0.01 | 0.69 | 0.05 | 2.16 | 0.11 | 3.92 | 0.19 | 5.71 | 0.24 | 6.85 |
| **Reductions from HD I/M[b]** | 0.00 | -8.05 | 0.00 | -9.93 | 0.00 | -10.87 | 0.00 | -11.63 | 0.00 | -12.01 |
| **Total[c]** | 53.26 | 58.20 | 46.94 | 48.51 | 42.29 | 42.17 | 38.56 | 38.00 | 37.24 | 36.42 |
| **Motor Vehicle Emissions Budget[d]** | 54 | 59 | 47 | 49 | 43 | 43 | 39 | 38 | 38 | 37 |

[a] This reflects increases from the removal of Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Omnibus, and Warranty Phase I Regulations adjustment factors approved by U.S. EPA on November 21, 2025
[b] This reflects reductions from the SIP-approved portion of the Heavy Duty Inspection/Maintenance Regulation. CARB submitted the adjustment factor to U.S. EPA for approval on March 26, 2026.
[c] Values may not add up due to rounding.
[d] Motor Vehicle Emission Budgets calculated are rounded up to the nearest tpd for emissions greater than 20 tpd, and to the nearest tenth of a tpd for emissions lower than 20 tpd.
Source: EMFAC2021 v1.02

The revised MVEBs were established according to the methodology outlined above and in consultation with SCAG, the South Coast AQMD, U.S. EPA, Federal Highway Administration, and Federal Transit Administration. These MVEBs will be effective once U.S. EPA determines they are adequate or approved.

As mentioned above, the U.S. EPA can only approve updates to MVEBs if it is demonstrated that the new MVEBs do not interfere with the RFP or attainment demonstrations. As discussed in the RFP section above, the revised MVEBs do not interfere with the South Coast's ability to meet RFP; as demonstrated below, the

revised MVEBs do not interfere with the South Coast's ability to attain the 70 ppb ozone standard by the required attainment date.

## Consistency with Attainment Demonstration

To demonstrate that the updated MVEBs developed using the newer on-road emissions model, EMFAC2021, do not interfere with the attainment demonstration, the rate of on-road emission changes predicted from the modeled base year, 2018, to the attainment year, 2037, in CEPAM2022 v1.01 ("revised" 2026) is compared to that predicted by EMFAC2021. As discussed above, the on-road emissions in CEPAM2022 v1.01 ("revised" 2026) were developed using EMFAC2017 and updated to account for recent federal actions by removing the emissions reduction benefits of regulations for which U.S. EPA will no longer allow areas to take credit in the attainment plans. Off-model adjustments to EMFAC2021 have also been developed to account for the adverse federal actions and reductions that cannot be credited. As such, EMFAC2021 and CEPAM2022v1.01 ("revised" 2026) account for the same on-road vehicle regulations and thus a comparison will demonstrate if the update to the EMFAC model shows an increase in emissions in the attainment year which would call into question the attainment demonstration in the 2022 South Coast AQMP.

As demonstrated in Table 9, EMFAC2021 predicts the rate of both on-road NOx reductions and on-road ROG reductions from 2018 to 2037 to be significantly greater in comparison to that of CEPAM2022v1.01 ("revised" 2026). On-road mobile source emissions developed using EMFAC2021 show a 59% reduction in ROG emissions and a 76% reduction in NOx emissions in 2037 compared to 2018 levels – this results in an increased rate of 3% ROG reductions and 7% NOx reductions in 2037 compared to the rate of reductions in mobile sources emissions in CEPAM2022v1.01 ("revised" 2026) derived using the EMFAC2017 model. Thus, this analysis demonstrates that the updated MVEBs do not interfere with the attainment demonstration as submitted in the 2022 South Coast AQMP.

**Table 9 - South Coast Rate of Emissions Reduction Comparison, EMFAC2017 to EMFAC2021**
(summer planning inventory, tpd)

| | On-road mobile source emissions | | |
|---|---|---|---|
| | | ROG | NOx |
| **CEPAM2022 v1.01 ("revised" 2026) (EMFAC2017)** | 2018 | 81.2 | 155.9 |
| | 2037 | 36.1 | 47.7 |
| **EMFAC2017 Percentage Reductions** | | 56% | 69% |
| **Updated MVEBs (EMFAC2021)** | 2018 | 92.3 | 157.3 |
| | 2037 | 38 | 37 |
| **EMFAC2021 Percentage Reductions** | | 59% | 76% |
| **Difference in Percentage Reductions (EMFAC2021-EMFAC2017)** | | 3% | 7% |

## Summary of SIP Revision for South Coast Air Basin

As a result of the unprecedented and illegal federal actions purporting to disapprove the waivers and authorizations granted under the Clean Air Act and the disapproval or delayed approval of submitted State regulations, CARB is proposing to revise SIP elements originally submitted to U.S. EPA in 2023 for the South Coast in the 2022 South Coast AQMP and the related CARB Staff Report . Specifically, CARB is revising the emissions reduction commitments associated with State measures used to demonstrate attainment of the 70 ppb ozone standard, the planning emissions inventories, the RFP demonstration, and the MVEBs.

# Chapter 4: San Joaquin Valley

This chapter proposes revisions to the State emission reduction commitments to support U.S. EPA approval of the San Joaquin Valley attainment plan for the 70 ppb ozone standard in the aftermath of the unprecedented federal actions targeting CARB programs. This revision also updates additional SIP elements originally included in the *2022 Plan for the 2015 8-hour Ozone Standard* (2022 Valley Ozone Plan) for the San Joaquin Valley.

Effective August 3, 2018, U.S. EPA designated the San Joaquin Valley as a nonattainment area for the 70 ppb ozone standard and classified the area as Extreme with an August 3, 2038, attainment date[28]. The San Joaquin Valley Air Pollution Control District (SJVAPCD), in coordination with CARB staff, prepared the 2022 Valley Ozone Plan to fulfill the requirements of the Act as applicable for the San Joaquin Valley, including to demonstrate the area will attain this standard by the end of 2037, the last full ozone season prior to the attainment date. The SJVAPCD adopted the 2022 Valley Ozone Plan on December 15, 2022, and submitted the plan to CARB on December 15, 2022. CARB adopted the 2022 Valley Ozone Plan on January 26, 2023, and submitted it to U.S. EPA as a revision to the California SIP on February 22, 2023. The 2022 Valley Ozone Plan addressed SIP requirements of the Act including an attainment demonstration incorporating SJVAPCD and CARB emission reduction commitments, planning emissions inventories, and an RFP demonstration with associated MVEBs for the milestone and attainment years.

As discussed previously, lack of action by the previous federal administration on the 2022 Valley Ozone Plan and the 2022 State SIP Strategy submittals, coupled with recent adverse federal actions concerning CARB's authority to enforce its mobile source regulations relied upon in these plans, means that CARB must update the State commitments to support the approvability of the attainment demonstration in the San Joaquin Valley. The 2026 Extreme Ozone SIP Revision ensures that CARB can continue to meet the State commitments while supporting the San Joaquin Valley's progress toward attaining the 70 ppb ozone standard in 2037.

In addition to updating the CARB commitments relevant to the San Joaquin Valley, CARB is also revising the planning emissions inventories to reflect federal actions affecting regulations originally included in the emissions inventories and providing emissions reductions in the milestone years. CARB is also revising the RFP demonstration in the 2022 Valley Ozone Plan to reflect the revisions to the planning emissions inventories. Further, the MVEBs are being revised in the milestone years to align with EMFAC2021 and to account for the federal actions; updated MVEBs are needed to replace the MVEBs submitted as a part of the 2022 Valley Ozone Plan

[28] 83 FR 25776, Posted June 4, 2018 and effective August 3, 2018, "Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards", *https://www.govinfo.gov/content/pkg/FR-2018-06- 04/pdf/2018-11838.pdf*

which were developed using EMFAC2017. In accordance with U.S. EPA rules and guidance on transportation conformity, this report demonstrates that the updated MVEBs do not interfere with the updated RFP demonstration and the attainment demonstration submitted in the 2022 Valley Ozone Plan.

## CARB Commitment to Achieve Emission Reductions

This section describes the proposed revision to the CARB emission reductions commitment from the SIP measures identified and quantified for the San Joaquin Valley. The 2022 Valley Ozone Plan and the 2022 State SIP Strategy as adopted by CARB in 2023 included estimates of the emission reductions from each of the individual new State measures. CARB's overall commitment, as the designated air pollution control agency under federal law for the State of California, is to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard, reflecting the combined reductions from the existing control measures not yet accounted for in emissions inventories and new measures.

Section 182(e)(5) of the Clean Air Act provides additional flexibility to nonattainment areas that are classified as Extreme for ozone and allows these areas to include commitments for emission reductions to come from future control techniques and technologies. Commitments from future control techniques and technologies are allowed under section 182(e)(5) because Extreme ozone nonattainment areas, such as the San Joaquin Valley, have 20 years after designations to attain the ozone standard and, in that time, advanced technologies may become available.

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorization requests previously granted by U.S. EPA under section 209 of the Act. These actions targeted six public health protective regulations: Advanced Clean Trucks (ACT), Zero-Emission Airport Shuttle, Zero-Emission Powertrain Certification, Heavy-Duty Warranty Phase 1, Heavy-Duty Omnibus, and ACC II. California disagrees with these unconstitutional and illegal actions targeting these six regulations and awaits the outcome of the relevant pending lawsuits challenging them.

That said, to support approval of the attainment plans, the 2026 Extreme Ozone SIP Revision proposes to revise a portion of CARB's aggregate commitment for the San Joaquin Valley in 2037 for emission reductions that were originally associated with the ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1, Heavy-Duty I/M, ACC II, In-Use Locomotive, and CHC Regulations to remove attribution of reductions to those regulations (or portions thereof) and now requests U.S. EPA approval of the corresponding commitments to reduce emissions under the provisions of 182(e)(5) of the Clean Air Act.

The tables in this section reflect the proposed revisions to the commitment to achieve emissions reductions as originally identified in the 2016 and 2022 State SIP Strategies and provide detail on to what extent emissions reductions previously associated with

individual measures are now proposed to be reallocated to commitments under 182(e)(5). The proposed updates are underlined to indicate additions and ~~strikethrough~~ to indicate deletions from the existing text.

The 2022 Valley Ozone Plan used photochemical modeling to demonstrate that the control strategy in the plan would provide the level of emissions reductions necessary to bring the San Joaquin Valley into attainment for the 70 ppb ozone standard by 2037, the attainment year for Extreme nonattainment areas. The attainment demonstration for the San Joaquin Valley included the benefits of CARB's existing mobile source control program and SJVAPCD regulations. The attainment demonstration further included emissions reductions from CARB commitments defined in the 2022 State SIP Strategy. CARB's overall commitment in the 2022 State SIP Strategy was to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard in the San Joaquin Valley. The total emissions reductions accounted for in the attainment demonstration, between those accounted for in the emissions inventories and from CARB commitments, is maintained for the San Joaquin Valley.

Table 10 summarizes the updated emissions reductions from CARB's current control program and CARB's proposed emissions reduction commitment that, collectively, provide the emissions reductions needed to support attainment of the 70 ppb ozone standard in the San Joaquin Valley. The proposed commitment includes reductions from the 2016 State SIP Strategy measures still in place, reductions from defined measures in the 2022 State SIP Strategy still in place, and reductions now proposed for approval under section 182(e)(5) future control techniques and technologies provisions of the Clean Air Act.

Table 11, Table 12, and Table 13 provide additional detail on the updated estimates and proposed emission reduction commitments.

**Table 10 – San Joaquin Valley NOx Emission Reductions from CARB Programs**

| CARB Programs in San Joaquin Valley | 2037 NOx Emission Reductions (tpd) |
|---|---|
| Current Control Program | ~~134.~~5 122.9 |
| Proposed CARB Emission Reductions Commitments | ~~25.3~~ 36.9 |
| 2016 State SIP Strategy Measures (Not yet in baseline inventory) | ~~1.9~~ <0.1 |
| 2022 State SIP Strategy Measures | ~~23.4~~ 13.2 |
| Clean Air Act Section 182(e)(5) | 23.6 |
| Total Reductions | 159.8 |

Note: numbers may not add up due to rounding

As described earlier, while most of the 2016 State SIP Strategy measure commitments had been adopted at the time of 2022 State SIP Strategy development, there were three 2016 State SIP Strategy measure commitments not yet adopted or accounted for in the baseline inventory, including regulations for light-duty passenger vehicles, transport refrigeration units, and forklifts. To ensure these remaining three 2016 State

SIP Strategy measure commitments were accounted for, the 2022 State SIP Strategy identified them as measures that would provide emissions reductions to be accounted for in the aggregate emissions reduction commitments. Table 11 reflects the original emission reduction estimates for these 2016 State SIP Strategy measures in the 2022 State SIP Strategy and the proposed updates to the emission reduction commitment.

**Table 11 – San Joaquin Valley Emission Reductions from Remaining 2016 State SIP Strategy**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Cars II[29] | ~~1.6~~ 0.0 | ~~1.3~~ 0.0 |
| Transport Refrigeration Unit Part I[30] | ~~0.3~~ <0.1 | ~~0.3~~ 0.2 |
| Zero-Emission Forklift | <0.1 | <0.1 |
| Total | ~~1.9~~ <0.1 | ~~1.7.~~ 0.3 |

Table 12 reflects the original emissions reduction estimates for the CARB measure commitments in the 2022 State SIP Strategy and the proposed updates to the emissions reduction commitment. The updates are for tonnage previously associated with the ACF Regulation, Drive Forward: Heavy-Duty Trucks Measure (previously known as Zero-Emission Trucks Measure), Transport Refrigeration Unit Regulation Part 2, and In-Use Locomotive Regulation.

[29] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[30] CARB continues to implement and enforce the portion of this regulation for which U.S. EPA granted the authorization, while the remaining 0.3 tpd NOx and <0.1 tpd ROG emissions reductions previously associated with this measure will now be associated with the Transport Refrigeration Unit Regulation Part 2.

**Table 12 – San Joaquin Valley Expected Emission Reductions from the 2022 State SIP Strategy**

| Proposed Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| On-Road Heavy-Duty | | |
| Advanced Clean Fleets Regulation[31] | ~~5.9~~ 0.1 | ~~0.4~~ <0.1 |
| ~~Zero-Emissions~~ Drive Forward: Heavy-Duty Trucks Measure[32] | ~~NYQ~~ 6.4 | ~~NYQ~~ 0.5 |
| Total On-Road Heavy-Duty Reductions | ~~5.9~~ 6.5 | ~~0.4~~ 0.5 |
| On-Road Light-Duty | | |
| On-Road Motorcycle New Emissions Standards | 0.3 | 0.6 |
| Clean Miles Standard | <0.1 | <0.1 |
| Total On-Road Light-Duty Reductions | 0.3 | 0.6 |
| Off-Road Equipment | | |
| Tier 5 Off-Road Vehicles and Equipment | 1.4 | NYQ |
| Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation | 0.6 | <0.1 |
| Transport Refrigeration Unit Measure ~~Regulation~~ Part 2[33] | ~~3.8~~ 4.1 | ~~0.5~~ 0.6 |
| Commercial Harbor Craft Amendments[34] | <0.1 | <0.1 |
| Cargo Handling Equipment Amendments | <0.1 | <0.1 |
| ~~Off-Road Zero-Emission Targeted Manufacturer Rule~~ Phased Advanced Clean Equipment Regulation | NYQ | NYQ |
| Clean Off-Road Fleet Recognition Program | NYQ | NYQ |
| Spark-Ignition Marine Engine Standards | 0.3 | 0.6 |
| Total Off-Road Equipment Reductions | ~~6.1~~ 6.3 | ~~1.2~~ 1.2 |
| Other | | |
| Consumer Products Standards | - | NYQ |
| ~~Zero-Emission Standard for~~ Clean Space and Water Heaters ~~Standards~~ | NYQ | NYQ |
| Enhanced Regional Emission Analysis in State Implementation Plans | NYQ | NYQ |
| Pesticides: 1,3-Dichloropropene Health Risk Mitigation | - | NYQ |
| Total Other Reductions | NYQ | NYQ |
| Primarily-Federally and Internationally Regulated Sources – CARB Measures | | |
| ~~In-Use Locomotive Regulation~~[35] | ~~11.2~~ 0.0 | ~~0.4~~ 0.0 |
| Future Measures for Aviation Emission Reductions | NYQ | NYQ |
| Total Primarily-Federally and Internationally Regulated Sources – CARB Measures Reductions | ~~11.2~~ NYQ | ~~0.4~~ NYQ |
| **Aggregate Emission Reductions** | **~~23.4~~ 13.2** | **~~2.5~~ 2.2** |

[31] CARB continues to implement and enforce the portion of this regulation still in effect as amended by CARB in September 2025; the remaining 5.8 tpd NOx and 0.4 tpd ROG emissions reductions previously associated with this measure are now associated with the Drive Forward: Heavy-Duty Trucks Measure.

[32] An additional 5.8 tpd NOx and 0.4 tpd ROG emissions reductions are now associated with this regulation due to changes from the Advanced Clean Fleets Regulation.

[33] An additional 0.3 tpd NOx and <0.1 tpd ROG emissions reductions are now associated with this regulation due to changes from the Transport Refrigeration Unit Part 1.

[34] CARB continues to implement and enforce the portion of this regulation for which U.S. EPA granted the authorization, thus this remains <0.1 tpd of NOx and <0.1 tpd ROG.

[35] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

Note: numbers may not add up due to rounding

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorizations previously-granted by U.S. EPA under section 209 of the Act for six CARB regulations. Additionally, U.S. EPA took final action in January 2026 to partially approve and partially disapprove CARB's SIP submittal of the Heavy-Duty I/M regulation. Specifically, the partial disapproval is limited to SIP inclusion of portions of the regulation that address emissions in California from out-of-state and out-of-country registered vehicles. This partial disapproval does not impact CARB's ability to fully enforce and implement the Heavy-Duty I/M regulation. However, the partial disapproval further undermines CARB's ability to meet its SIP measure and emission reduction commitments because CARB cannot take SIP credit for the emission reductions from the parts of the regulation not added to the SIP.

Of the regulations affected by the adverse federal actions, ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1 and Heavy-Duty I/M were originally accounted for in the baseline emissions inventories at the time of development of the 2022 State SIP Strategy and the 2022 Valley Ozone Plan. Table 13 summarizes the emissions reductions originally associated with these programs, which have now been removed from the planning emissions inventories and which CARB staff are now proposing to be reallocated to commitments under 182(e)(5).

**Table 13 – San Joaquin Valley Emission Reductions from Regulations Removed from the Planning Emissions Inventory**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Trucks Regulation, Heavy-Duty Low-NOx Omnibus Regulation, Heavy-Duty Warranty Phase 1[36] | 7.3 | 0.1 |
| Heavy-Duty Inspection and Maintenance[37] | 3.5 | <0.1 |
| Total | **10.8** | **0.1** |

While this revision includes estimates of the emissions reductions from individual measures, CARB's overall commitment is to achieve the total emissions reductions necessary from sources in California to attain the federal air quality standards. Therefore, if a particular measure does not achieve its expected emission reductions, the State's overall commitment to achieving the total aggregate emission reductions still exists. If actual emission decreases occur that are larger than the projections reflected in the current emission inventory and the 2022 State SIP Strategy, CARB will

[36] For reductions previously associated with these measures, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[37] CARB continues to fully implement and enforce the Heavy-Duty I/M regulation, but for the emissions reductions associated with the portion of the regulation that U.S. EPA did not approve into the SIP, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

submit an updated emissions inventory to U.S. EPA as part of a SIP revision. A new 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.

## Planning Emissions Inventories

U.S. EPA guidance requires that planning emissions inventories submitted with attainment plans are consistent with the baseline year and milestone years within the RFP demonstration. For the planning emissions inventory for the San Joaquin Valley 70 ppb ozone standard, baseline emissions inventories were developed using CARB's 2019 California Emissions Projection Analysis Model (CEPAM2019), Emission Projections, Version 1.04.

CEPAM2019 v1.04 used 2017, the year of the most recently available triennial National Emissions Inventory at the time U.S. EPA designated the San Joaquin Valley as nonattainment, as the base year inventory; inventories for other years are back-cast or forecast from that base year inventory. The on-road motor vehicle emissions in the emissions inventories were generated using CARB's mobile source emissions model, EMFAC2017. On-road motor vehicle activity data (vehicle miles traveled [VMT] and speed distributions) was provided from the eight San Joaquin Valley MPOs from their 2019 Federal State Transportation Improvement Program (FSTIP) amendment. Off-road mobile source emissions were generated using CARB's OFFROAD model.

Consistent with U.S. EPA guidance requiring the RFP baseline year to be the year of the most recently available triennial National Emissions Inventory, a 2017 baseline year was used for demonstrating RFP. U.S. EPA guidance requires that inventories be developed and submitted for years that are consistent with the baseline year, 2017, and milestone years needed for the RFP demonstration[38]. The future year planning inventories needed for the RFP demonstration in the 2022 Valley Ozone Plan were 2023, 2026, 2029, 2032, 2035 and 2037.

Planning emissions inventories account for rules and regulations as adopted and in place at the time of development; for CEPAM2019 Version 1.04, this included CARB's ACT, Heavy-Duty Omnibus, Warranty Phase I, and Heavy-Duty I/M regulations. Due to federal actions purporting to disapprove previously-approved waivers and authorizations for the ACT, Heavy-Duty Omnibus, and Warranty Phase I regulations, and U.S. EPA's partial SIP disapproval of the Heavy-Duty I/M regulation, a revised planning emissions inventory is required for the 70 ppb ozone standard.

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[38] *eCFR :: 40 CFR 51.1310 -- Requirements for reasonable further progress (RFP).*

CARB staff developed a revised version of CEPAM2019 Version 1.04 that removes the emissions reductions benefits of the regulations affected by the adverse federal actions (ACT, Heavy-Duty Omnibus, Warranty Phase I, and the portion of the Heavy-Duty I/M regulation applicable to out-of-state or out-of-country registered vehicles) which U.S. EPA will no longer allow be credited in the SIP. Aside from removal of the emissions benefits of these regulations, this planning emissions inventory is identical to the one originally included in the 2022 Valley Ozone Plan, for which a detailed description of the data and methodologies was included in Appendix B[39].

It should be noted also that since the implementation of the effected regulations did not begin until after 2017, the revised 2017 planning emission inventories are identical to those in the 2022 Valley Ozone Plan. The revised planning emissions inventory for the San Joaquin Valley as applicable for the 70 ppb ozone standard is summarized in Table 14. More detail can be found in Appendix A.

**Table 14 - Revised San Joaquin Valley Planning Emissions Inventory**
(summer planning inventory, tpd)

| | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| **ROG** | | | | | | | |
| **Stationary and Area-wide** | 238.66 | 239.65 | 238.48 | 240.72 | 244.43 | 248.70 | 252.06 |
| **On-Road Motor Vehicles*** | 33.92 | 21.17 | 18.79 | 17.12 | 15.57 | 14.20 | 13.58 |
| **Off-Road Vehicles and Equipment** | 53.10 | 44.99 | 39.51 | 34.17 | 30.21 | 27.23 | 25.46 |
| **Total Emissions** | 325.68 | 305.81 | 296.78 | 292.02 | 290.21 | 290.13 | 291.11 |
| **NOx** | | | | | | | |
| **Stationary and Area-wide** | 32.19 | 29.26 | 23.44 | 22.33 | 20.35 | 19.93 | 19.83 |
| **On-Road Motor Vehicles*** | 100.61 | 51.64 | 40.59 | 36.24 | 33.95 | 32.66 | 32.37 |
| **Off-Road Vehicles and Equipment** | 99.59 | 77.53 | 67.97 | 60.98 | 55.51 | 50.52 | 46.60 |
| **Total Emissions** | 232.39 | 158.43 | 132.00 | 119.56 | 109.80 | 103.10 | 98.80 |

*On-Road emission inventory developed using EMFAC2017
Source: CEPAM2019 v1.04 ("revised" 2026)

## Reasonable Further Progress Demonstration

With the revision to the planning emissions inventories for the 2022 Valley Ozone Plan, a revised RFP demonstration is also needed. The new RFP demonstration must use the revised planning emissions inventory in order to account for the adverse federal actions and also demonstrate that RFP is maintained when accounting for any differences between the updated planning emissions inventories and the updated MVEBs developed using EMFAC2021 (updates discussed in more detail below); to do this, the revised RFP demonstration includes an adjustment to account for the changes to on-road emissions predicted by the new transportation model, EMFAC2021. To be conservative in the adjustment regarding the use of the

[39] *Appendix B*

EMFAC2021 transportation model, only increases in the differences between EMFAC2017 and EMFAC2021 are included in the RFP demonstration below.

The revised RFP demonstration for the 70 ppb ozone standard in Table 15 uses the CEPAM2019 v1.04 ("revised" 2026) planning emissions discussed above and applies two line item adjustments. The first adjustment is to demonstrate RFP is maintained with the revised MVEBs and accounts for emissions increases, if any, resulting from the updated county-level MVEBs in Table 16 based on the newer transportation model, EMFAC2021. In addition, as in the RFP demonstration in the 2022 Valley Ozone Plan, Emission Reductions Credits (ERCs) banked prior to 2017 are also included - see Appendix I of the 2022 Valley Ozone Plan for more information on ERCs.

**Table 15 - Revised San Joaquin Valley RFP Demonstration**
(summer planning inventory out to 3 nautical miles, tpd)

| Year | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ROG emissions | 325.68 | 305.81 | 296.78 | 292.02 | 290.21 | 290.13 | 291.11 |
| EMFAC2021 adjustment | | 0.0 | 0.61 | 0 | 0 | 0.10 | 0.22 |
| Adjusted ROG | 325.68 | 305.81 | 297.39 | 292.02 | 290.21 | 290.23 | 291.33 |
| Required % change since 2017 | | 18.0% | 27.0% | 36.0% | 45.0% | 54.0% | 60.0% |
| Target ROG Level | | 267.06 | 237.75 | 208.44 | 179.12 | 149.81 | 130.27 |
| Shortfall(-)/ Surplus(+) in ROG | | -38.75 | -59.64 | -83.58 | -111.09 | -140.42 | -161.05 |
| Shortfall(-)/ Surplus(+) in ROG, % | | -12% | -18% | -26% | -34% | -43% | -49% |
| Year | 2017 | 2026 | 2026 | 2029 | 2032 | 2035 | 2037 |
| NOx emissions | 232.39 | 158.43 | 132.00 | 119.56 | 109.80 | 103.10 | 98.80 |
| Emissions Reduction Credits | | 2.43 | 2.43 | 2.43 | 2.43 | 2.43 | 2.43 |
| EMFAC2021 adjustment | | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjusted NOx | 232.39 | 160.86 | 134.43 | 121.99 | 112.23 | 105.53 | 101.23 |
| Change in NOx since 2017 | | 71.53 | 97.96 | 110.40 | 120.16 | 126.86 | 131.16 |
| Change in NOx since 2017, % | | 31% | 42% | 48% | 52% | 55% | 56% |
| NOx reductions since 2017 used for ROG substitution in this milestone year, % | | 12% | 18% | 26% | 34% | 43% | 49% |
| NOx reductions since 2017 surplus after meeting ROG substitution needs in this milestone year, % | | 19% | 24% | 22% | 18% | 11% | 7% |
| RFP shortfall (-), if any | | 0% | 0% | 0% | 0% | 0% | 0% |
| RFP Met? | | YES | YES | YES | YES | YES | YES |

Note: numbers may not add up due to rounding

Table 15 demonstrates that ROG and NOx emission reductions in the revised planning emissions inventories meet the RFP targets in the 2023, 2026, 2029, 2032, and 2035 milestone years and the 2037 attainment year for the 70 ppb ozone standard. In addition, Table 15 demonstrates consistency between the RFP and the EMFAC2021-based MVEBs by including a line-item adjustment to account for the differences in the on-road mobile source emissions projections in the CEPAM inventory and the combined MVEBs which are rounded up to the nearest tenth of a ton per day (see below for more information on the MVEBs).

## Motor Vehicle Emissions Budgets

As discussed in Chapter 1, the portion of the total planning emissions inventory attributable to on-road motor vehicles is identified by the Act for transportation

conformity purposes and used to establish MVEBs[40]. Section 176(c) of the Act establishes transportation conformity requirements using MVEBs to ensure that transportation activities do not interfere with a region's air quality progress.

The MPOs in the San Joaquin Valley prepare a long-range RTP at least every four years and a short-range funding program, or the Regional Transportation Improvement Program (RTIP), every two years. Before adopting the RTP or RTIP, the MPOs prepare a regional emissions analysis using the proposed plan and program as specified in the federal conformity regulation[41] and compare those emissions to the MVEBs in the 2022 Valley Ozone Plan. The MPOs may determine that the RTP/RTIP conforms if the emissions from the proposed actions are less than the MVEBs approved in the SIP. The conformity determination also signifies that the MPOs have met other transportation conformity requirements, such as interagency consultation and financial constraint.

The 2022 Valley Ozone Plan established MVEBs for ROG and NOx emissions for the 70 ppb ozone milestone years using emission rates from EMFAC2017 and activity data (VMT and speed distributions) from the MPOs' 2019 FSTIP activity data[42]. The original MVEBs were consistent with the originally submitted planning emission inventory and included reductions from adopted regulations in all milestone years, as well as commitments for additional regulations in the attainment year (see Appendix D of the 2022 Valley Ozone Plan for additional details[43]).

With the revision to the San Joaquin Valley planning emissions inventories to remove the emission reductions from the on-road mobile source regulations affected by the adverse federal actions, the MVEBs for the 70 ppb ozone standard in the San Joaquin Valley must also be revised. In addition to revising the MVEBs to account for the federal actions, the revised MVEBs must also use the latest EMFAC model approved by U.S. EPA, EMFAC2021, which is now required for all conformity purposes, as well as the latest activity data approved by the San Joaquin Valley MPOs.

The MVEBs for the eight San Joaquin Valley MPOs in Table 16 and Table 17 were developed for a summer average day emissions consistent with the ozone attainment and RFP demonstrations, using the following method:

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[40] Federal transportation conformity regulations are found in 40 CFR Parts 51 and 93 – Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Titles 23 or 49 of the United States Code.

[41] 40 CFR Parts 51 and 93, *eCFR :: 40 CFR Part 93 -- Determining Conformity*

[42] *2019 Federal State Transportation Improvement Program (FSTIP) amendment*

[43] *2022 Valley Ozone Plan, App D*

1) Used the EMFAC2021 model to produce the on-road motor vehicle emissions (average summer day) for the appropriate pollutants (ROG and NOx) using 2025 FSTIP activity data (VMT and Speed);

2) Applied the Off-Model Adjustment Factors to reflect the illegal federal actions purporting to disapprove the Clean Air Act waivers for the ACT and Omnibus regulations and accounting for only the SIP-approved portion of the Heavy-Duty I/M Regulation; and

3) Rounded up the totals for ROG and NOx to the nearest tenth of a ton.

**Table 16 - Revised San Joaquin Valley MVEBs, MPO-Specific**
(summer planning inventory, tpd)

| Fresno MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| Vehicular Exhaust | 4.39 | 8.22 | 3.83 | 7.34 | 3.40 | 6.77 | 3.45 | 7.15 | 3.28 | 6.98 |
| Reductions removed from affected regulations[a] | 0 | 0.13 | 0.01 | 0.38 | 0.02 | 0.66 | 0.03 | 1.05 | 0.04 | 1.24 |
| Reductions from Heavy-Duty I/M[b] | 0.00 | -1.38 | 0.00 | -1.70 | 0.00 | -1.89 | 0.00 | -2.31 | 0.00 | -2.42 |
| Total[c] | 4.39 | 6.97 | 3.84 | 6.02 | 3.42 | 5.54 | 3.48 | 5.89 | 3.32 | 5.80 |
| Motor Vehicle Emissions Budget[d] | 4.4 | 7.0 | 3.9 | 6.1 | 3.5 | 5.6 | 3.5 | 5.9 | 3.4 | 5.8 |

| Kern MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| Vehicular Exhaust | 3.68 | 10.39 | 3.26 | 9.68 | 2.93 | 9.29 | 2.69 | 9.16 | 2.58 | 9.19 |
| Reductions removed from affected regulations[a] | 0 | 0.19 | 0.01 | 0.57 | 0.02 | 1.00 | 0.03 | 1.43 | 0.04 | 1.70 |
| Reductions from Heavy-Duty I/M[b] | 0.00 | -2.12 | 0.00 | -2.62 | 0.00 | -2.96 | 0.00 | -3.28 | 0.00 | -3.49 |
| Total[c] | 3.68 | 8.46 | 3.27 | 7.62 | 2.94 | 7.33 | 2.72 | 7.31 | 2.62 | 7.41 |
| Motor Vehicle Emissions Budget[d] | 3.7 | 8.5 | 3.3 | 7.7 | 3.0 | 7.4 | 2.8 | 7.4 | 2.7 | 7.5 |

| Kings MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| Vehicular Exhaust | 0.77 | 2.01 | 0.69 | 1.92 | 0.63 | 1.86 | 0.58 | 1.82 | 0.55 | 1.83 |
| Reductions removed from | 0 | 0.04 | 0 | 0.11 | 0 | .19 | 0.01 | 0.27 | 0.01 | 0.33 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **affected regulations[a]** | | | | | | | | | | |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.40 | 0.00 | -0.50 | 0.00 | -0.58 | 0.00 | -0.64 | 0.00 | -0.68 |
| **Total[c]** | 0.77 | 1.65 | 0.70 | 1.52 | 0.63 | 1.47 | 0.58 | 1.46 | 0.56 | 1.48 |
| **Motor Vehicle Emissions Budget[d]** | 0.8 | 1.7 | 0.7 | 1.6 | 0.7 | 1.5 | 0.6 | 1.5 | 0.6 | 1.5 |

| **Madera MVEBs** | **2026** | | **2029** | | **2032** | | **2035** | | **2037** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 0.85 | 1.77 | 0.73 | 1.54 | 0.64 | 1.40 | 0.59 | 1.33 | 0.55 | 1.28 |
| **Reductions removed from affected regulations[a]** | 0 | 0.03 | 0 | 0.08 | 0 | 0.13 | 0.01 | 0.19 | 0.01 | 0.22 |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.30 | 0.00 | -0.35 | 0.00 | -0.39 | 0.00 | -0.43 | 0.00 | -0.44 |
| **Total[c]** | 0.85 | 1.51 | 0.73 | 1.27 | 0.64 | 1.14 | 0.60 | 1.10 | 0.56 | 1.06 |
| **Motor Vehicle Emissions Budget[d]** | 0.9 | 1.6 | 0.8 | 1.3 | 0.7 | 1.2 | 0.6 | 1.1 | 0.6 | 1.1 |

| **Merced MVEBs** | **2026** | | **2029** | | **2032** | | **2035** | | **2037** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 1.43 | 4.29 | 1.23 | 3.89 | 1.04 | 3.51 | 0.95 | 3.43 | 0.89 | 3.37 |
| **Reductions removed from affected regulations[a]** | 0 | 0.08 | 0 | 0.22 | 0.01 | 0.37 | 0.01 | 0.52 | 0.01 | 0.60 |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.86 | 0.00 | -1.04 | 0.00 | -1.10 | 0.00 | -1.22 | 0.00 | -1.26 |
| **Total[c]** | 1.43 | 3.51 | 1.23 | 3.07 | 1.04 | 2.77 | 0.96 | 2.73 | 0.90 | 2.71 |
| **Motor Vehicle Emissions Budget[d]** | 1.5 | 3.6 | 1.3 | 3.1 | 1.1 | 2.8 | 1.0 | 2.8 | 1.0 | 2.8 |

| San Joaquin MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 3.47 | 5.82 | 3.07 | 5.17 | 2.70 | 4.64 | 2.51 | 4.40 | 2.41 | 4.30 |
| **Reductions removed from affected regulations[a]** | 0 | 0.08 | 0.01 | 0.25 | 0.01 | 0.44 | 0.02 | 0.64 | 0.02 | 0.77 |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.89 | 0.00 | -1.11 | 0.00 | -1.22 | 0.00 | -1.35 | 0.00 | -1.43 |
| **Total[c]** | 3.47 | 5.01 | 3.07 | 4.32 | 2.71 | 3.87 | 2.52 | 3.69 | 2.44 | 3.64 |
| **Motor Vehicle Emissions Budget[d]** | 3.5 | 5.1 | 3.1 | 4.4 | 2.8 | 3.9 | 2.6 | 3.7 | 2.5 | 3.7 |

| Stanislaus MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 2.34 | 3.75 | 2.05 | 3.28 | 1.81 | 2.95 | 1.61 | 2.69 | 1.55 | 2.63 |
| **Reductions removed from affected regulations[a]** | 0 | 0.05 | 0 | 0.15 | 0.01 | 0.27 | 0.01 | 0.38 | 0.02 | 0.46 |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.50 | 0.00 | -0.63 | 0.00 | -0.71 | 0.00 | -0.77 | 0.00 | -0.83 |
| **Total[c]** | 2.34 | 3.30 | 2.05 | 2.80 | 1.81 | 2.51 | 1.62 | 2.29 | 1.57 | 2.26 |
| **Motor Vehicle Emissions Budget[d]** | 2.4 | 3.4 | 2.1 | 2.9 | 1.9 | 2.6 | 1.7 | 2.3 | 1.6 | 2.3 |

| Tulare MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 2.13 | 3.54 | 1.85 | 3.13 | 1.62 | 2.88 | 1.47 | 2.78 | 1.38 | 2.72 |
| **Reductions removed from affected regulations[a]** | 0 | 0.04 | 0 | 0.13 | 0.01 | 0.23 | 0.01 | 0.34 | 0.01 | 0.4 |
| **Reductions from Heavy-Duty I/M[b]** | 0.00 | -0.45 | 0.00 | -0.55 | 0.00 | -0.62 | 0.00 | -0.68 | 0.00 | -0.72 |
| **Total[c]** | 2.13 | 3.09 | 1.85 | 2.58 | 1.62 | 2.26 | 1.47 | 2.10 | 1.38 | 2.01 |
| **Motor Vehicle Emissions Budget[d]** | 2.2 | 3.1 | 1.9 | 2.6 | 1.7 | 2.3 | 1.5 | 2.1 | 1.4 | 2.1 |

[a] This reflects increases from the removal of Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Omnibus, and Warranty Phase I Regulations adjustment factors approved by USEPA on November 21, 2025.
[b] This reflects reductions from the SIP-approved portion of the Heavy Duty Inspection/Maintenance Regulation. CARB submitted the adjustment factor to U.S. EPA for approval on March 26, 2026.
[c] Values may not add up due to rounding.
[d] Motor Vehicle Emission Budgets calculated are rounded up to the nearest tpd for emissions greater than 20 tpd, and to the nearest tenth for emissions lower than 20 tpd.
Source: EMFAC2021 v1.02

**Table 17 - Revised San Joaquin Valley MVEBs, Combined**
(summer planning inventory, tpd)

| MVEBs | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 19.05 | 39.75 | 16.70 | 35.82 | 14.75 | 33.07 | 13.82 | 32.43 | 13.19 | 31.90 |
| **Reductions removed from affected regulations[a]** | 0.01 | 0.64 | 0.04 | 1.88 | 0.08 | 3.29 | 0.13 | 4.82 | 0.16 | 5.72 |
| **Reductions from Heavy-Duty I/M[b]** | 0 | -6.90 | 0 | -8.50 | 0 | -9.46 | 0 | -10.67 | 0 | -11.26 |
| **Total[c]** | 19.06 | 33.49 | 16.74 | 29.20 | 14.82 | 26.90 | 13.95 | 26.58 | 13.35 | 26.36 |
| **Motor Vehicle Emissions Budget[d]** | 19.1 | 34 | 16.8 | 30.0 | 14.9 | 27.0 | 14.0 | 27.0 | 13.4 | 27.0 |

[a] This reflects increases from the removal of Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Omnibus, and Warranty Phase I Regulations adjustment factors approved by USEPA on November 21, 2025.
[b] This reflects reductions from the SIP-approved portion of the Heavy Duty Inspection/Maintenance Regulation. CARB submitted the adjustment factor to U.S. EPA for approval on March 26, 2026.
[c] Values from may not add up due to rounding.
[d] Motor Vehicle Emission Budgets calculated are rounded up to the nearest tpd for emissions greater than 20 tpd, and to the nearest tenth for emissions lower than 20 tpd.
Source: EMFAC2021 v1.02

The revised MVEBs were established according to the methodology outlined above and in consultation with the San Joaquin Valley MPOs, the SJVAPCD, U.S. EPA,

Federal Highway Administration, and Federal Transit Administration. These MVEBs will be effective once approved by the U.S. EPA.

As mentioned above, U.S. EPA can only approve updates to MVEBs if it is demonstrated that the new MVEBs do not interfere with the RFP or attainment demonstrations. As discussed in the RFP section above, the revised MVEBs do not interfere with the San Joaquin Valley's ability to meet the RFP; as demonstrated below, the revised MVEBs do not interfere with the San Joaquin Valley's ability to attain the 70 ppb ozone standard by the required attainment date.

## Consistency with Attainment Demonstration

To demonstrate that the updated MVEBs developed using the newer on-road emissions model, EMFAC2021, do not interfere with the attainment demonstration, the rate of on-road emission changes predicted from the modeled base year, 2018, to the attainment year, 2037, in CEPAM2019 v1.04 ("revised" 2026) is compared to that predicted by EMFAC2021 for each county as seen in Table 16. As discussed above, the on-road emission in CEPAM2019 v1.04 ("revised" 2026) was developed using EMFAC2017 and updated to account for recent federal actions by removing the emissions reduction benefits of regulations for which U.S. EPA will no longer allow areas to take credit in the attainment plans. Off-model adjustments to EMFAC2021 have also been developed to account for the adverse federal actions and reductions that cannot be credited. As such, EMFAC2021 and CEPAM2019 v1.04 ("revised" 2026) account for the same on-road vehicle regulations and thus a comparison will demonstrate if the update to the EMFAC model shows an increase in emissions in the attainment year which would call into question the attainment demonstration in the 2022 Valley Ozone Plan.

As demonstrated in Table 18, EMFAC2021 predicts the rate of on-road NOx reductions from 2018 to 2037 to be significantly greater in comparison to that of CEPAM2019 v1.04 ("revised" 2026). On-road mobile source emissions developed using EMFAC2021 show a 69% reduction in NOx emissions in 2037 compared to 2018 levels – this results in an increased rate of 3.2% NOx reductions in 2037 compared to the rate of reductions in mobile sources emissions in CEPAM2019 v1.04 ("revised" 2026) derived using the EMFAC2017 model. For the rate of ROG emissions reductions from 2018 to 2037, EMFAC2021 demonstrates a slightly lower rate of reductions than those in CEPAM2019 v1.04 ("revised" 2026), a rate of 55% - this results in a decreased rate of 1.7% ROG reductions in 2037 compared to the rate of reductions in mobile sources emissions in CEPAM2019 v1.04 ("revised" 2026) derived using the EMFAC2017 model. However, as demonstrated in the 2022 Valley Ozone Plan (see Page F-45 in Appendix F)[44], NOx emissions reductions are immediately and incrementally more effective than corresponding ROG emissions

[44] Appendix F: Modeling Protocol and Attainment Demonstration 2022 Plan for the 2015 8-Hour Ozone Standard

reductions in lowering ozone levels in the San Joaquin Valley. As such, the slight decrease in the rate of ROG reductions are more than compensated with by the larger increase in the rate of NOx reductions. Thus, this analysis demonstrates that the attainment demonstration in the 2022 Valley Ozone Plan is maintained.

**Table 18 - San Joaquin Valley Rate of Emissions Reduction Comparison, EMFAC2017 to EMFAC2021**
(summer planning inventory, tpd)

| | | On-road Mobile Source Emissions | |
|---|---|---|---|
| | | ROG | NOx |
| **CEPAM2019 v1.04 ("revised" 2026) (EMFAC2017)** | 2018 | 31.2 | 93.4 |
| | 2037 | 13.6 | 32.4 |
| **EMFAC2017 Percentage Reductions** | | 56% | 65% |
| **Updated MVEBs (EMFAC2021)** | 2018 | 30.5 | 85.8 |
| | 2037 | 13.8 | 27.0 |
| **EMFAC2021 Percentage Reductions** | | 55% | 69% |
| **Difference in Percentage Reductions (EMFAC2021-EMFAC2017)** | | -1.7% | 3.2% |

## Summary of SIP Revision for San Joaquin Valley

As a result of the unprecedented and illegal federal actions purporting to disapprove the waivers and authorizations granted under the Clean Air Act and the disapproval or delayed approval of submitted State regulations, CARB is proposing to revise SIP elements originally submitted to U.S. EPA in 2023 in the 2022 Valley Ozone Plan. Specifically, CARB is revising the emissions reduction commitments associated with State measures used to demonstrate attainment of the 70 ppb ozone standard, the planning emissions inventories, the RFP demonstration, and the MVEBs.

# Chapter 5: Coachella Valley

This chapter proposes revisions to the State emission reduction commitments to support U.S. EPA approval of the Coachella Valley attainment plan for the 70 ppb ozone standard in the aftermath of the unprecedented federal actions targeting CARB programs. This revision will also update additional SIP elements originally included in the *2022 Air Quality Management Plan for the 70 parts per billion 8-hour ozone Standard in the South Coast Air Basin and Coachella Valley* (2022 South Coast AQMP) for the Coachella Valley.

Effective August 3, 2018, U.S. EPA designated the Coachella Valley as nonattainment area for the 70 ppb ozone standard and classified the area as Severe with an August 3, 2033, attainment date[45] The South Coast AQMD, in coordination with CARB staff, prepared the 2022 South Coast AQMP to fulfill the requirements of the Clean Air Act (Act) as applicable for Coachella Valley, including to request the area be reclassified to Extreme and demonstrate the area will attain this standard by the end of 2037, the last full ozone season prior to the attainment date. The South Coast AQMD adopted the 2022 South Coast AQMP on December 2, 2022, and submitted the plan to CARB on December 13, 2022. CARB adopted the 2022 South Coast AQMP on January 26, 2023, and submitted it to U.S. EPA as revisions to the California SIP on February 22, 2023. The 2022 South Coast AQMP addressed SIP requirements of the Act including an attainment demonstration incorporating the South Coast AQMD and CARB emission reduction commitments, planning emissions inventories, and an RFP demonstration with associated MVEBs for the milestone and attainment years.

As discussed previously, lack of action by the previous federal administration on the 2022 South Coast AQMP and the 2022 State SIP Strategy submittals, coupled with recent adverse federal actions concerning CARB's authority to enforce its mobile source regulations relied upon in these plans, means that CARB must update the State commitments to support the approvability of the attainment demonstration in the Coachella Valley. The 2026 Extreme Ozone SIP Revision ensures that CARB can continue to meet the State commitments while supporting the Coachella Valley's progress toward attaining the 70 ppb ozone standard in 2037.

In addition to updating the CARB commitments relevant to the Coachella Valley, CARB is also revising the planning emissions inventories for the South Coast to reflect federal actions affecting regulations originally included in the emissions inventories and providing emissions reductions in the milestone years. CARB is also revising the RFP demonstration in the 2022 South Coast AQMP to reflect the revisions to the planning emissions inventories. Further, the MVEBs are being revised in the milestone years to align with EMFAC2021 and to account for the federal actions;

[45] *70 ppb ozone Designations*

updated MVEBs are needed to replace the MVEBs submitted as a part of the 2022 South Coast AQMP which were developed using EMFAC2017. In accordance with U.S. EPA rules and guidance on transportation conformity, this report demonstrates that the updated MVEBs do not interfere with the updated RFP demonstration and the attainment demonstration submitted in the 2022 South Coast AQMP.

## CARB Commitment to Achieve Emission Reductions

This section describes the proposed revision to the CARB emission reductions commitment from the SIP measures identified and quantified for the Coachella Valley. The 2022 South Coast AQMP, and the 2022 State SIP Strategy as adopted by CARB in 2023 included estimates of the emission reductions from each of the individual new State measures. CARB's overall commitment, as the designated air pollution control agency under federal law for the State of California, is to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard, reflecting the combined reductions from the existing control measures not yet accounted for in emissions inventories and new measures.

Section 182(e)(5) of the Clean Air Act provides additional flexibility to nonattainment areas that are classified as Extreme for ozone and allows these areas to include commitments for emission reductions to come from future control techniques and technologies. Commitments from future control techniques and technologies are allowed under section 182(e)(5) because Extreme ozone nonattainment areas, such as the Coachella Valley, have 20 years after designations to attain the ozone standard and, in that time, advanced technologies may become available.

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorization requests previously granted by U.S. EPA under section 209 of the Act. These actions targeted six public health protective regulations: ACT, Zero-Emission Airport Shuttle, Zero-Emission Powertrain Certification, Heavy-Duty Warranty Phase 1, Heavy-Duty Omnibus, and ACC II. California disagrees with these unconstitutional and illegal actions targeting these six regulations and awaits the outcome of the relevant pending lawsuits challenging them.

That said, in order to support approval of the attainment plans, the 2026 Extreme Ozone SIP Revision  proposes to revise a portion of CARB's aggregate commitment for the Coachella Valley in 2037 for emission reductions that were originally associated with the ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1, Heavy-Duty I/M, ACC II, and In-Use Locomotive Regulations to remove attribution of reductions to those regulations (or portions thereof) and now requests U.S. EPA approval of the corresponding commitments to reduce emissions under the provisions of 182(e)(5) of the Clean Air Act.

The tables in this section reflect the proposed revisions to the commitment to achieve emissions reductions as originally identified in the 2016 and 2022 State SIP Strategies

and provide detail on to what extent emissions reductions previously associated with individual measures are now proposed to be reallocated to commitments under 182(e)(5). The proposed updates are underlined to indicate additions and ~~strikethrough~~ to indicate deletions from the existing text.

The 2022 South Coast AQMP used photochemical modeling to demonstrate that the control strategy would provide the level of emissions reductions necessary to bring the Coachella Valley into attainment for the 70 ppb ozone standard by 2037, the attainment year for Extreme nonattainment areas. The attainment demonstration for the Coachella Valley included the benefits of CARB's existing mobile source control program and District regulations. The attainment demonstration further included emissions reductions from CARB commitments defined in its 2022 State SIP Strategy. CARB's overall commitment in the 2022 State SIP Strategy is to achieve the total aggregate emission reductions necessary from State-regulated sources to attain the 70 ppb ozone standard in the Coachella Valley. The total emissions reductions accounted for in the attainment demonstration, between those accounted for in the emissions inventories and from CARB commitments, is maintained for the Coachella Valley.

Table 19 summarizes the updated emissions reductions from CARB's current control program and CARB's proposed emissions reduction commitment that, collectively, provide the emissions reductions needed to support attainment of the 70 ppb ozone standard in the Coachella Valley. The proposed commitment includes reductions from the 2016 State SIP Strategy measures still in place, reductions from defined measures in the 2022 State SIP Strategy still in place, and reductions now proposed for approval under section 182(e)(5) future control techniques and technologies provisions of the Clean Air Act. Table 20, Table 21, and Table 22 provide additional detail on the updated estimates and proposed emission reduction commitments.

**Table 19 – Coachella Valley NOx Emission Reductions from CARB Programs**

| CARB Programs in South Coast | 2037 NOx Emission Reductions (tpd) |
|---|---|
| Current Control Program | ~~9.7~~ 7.8 |
| Potential CARB Emission Reductions Commitments | ~~5.2~~ 7.1 |
| 2016 State SIP Strategy Measures (Not yet in baseline inventory) | ~~0.2~~ <0.1 |
| 2022 State SIP Strategy Measures | ~~5.0~~ 2.0 |
| Clean Air Act Section 182(e)(5) | 5.1 |
| Total Reductions | 14.9 |

Note: numbers may not add up due to rounding

As described earlier, while most of the 2016 State SIP Strategy measure commitments had been adopted at the time of 2022 State SIP Strategy development, there were three 2016 State SIP Strategy measure commitments not yet adopted or accounted for in the baseline inventory including regulations for light-duty passenger vehicles, transport refrigeration units, and forklifts. To ensure these remaining three 2016 State

SIP Strategy measure commitments were accounted for, the 2022 State SIP Strategy identified them as measures that would provide emissions reductions to be accounted for in the aggregate emissions reduction commitments. Table 20 reflects the original emission reduction estimates for these 2016 State SIP Strategy measures in the 2022 State SIP Strategy and the proposed updates to the emission reduction commitment.

**Table 20 – Coachella Valley Emission Reductions from Remaining 2016 State SIP Strategy**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Cars II[46] | ~~0.2~~ 0.0 | ~~0.2~~ 0.0 |
| Transport Refrigeration Unit Part I[47] | ~~<0.1~~ <0.1 | ~~<0.1~~ <0.1 |
| Zero-Emission Forklift | <0.1 | <0.1 |
| Total | ~~0.2~~ <0.1 | ~~0.2~~ <0.1 |

Table 21 reflects the original emission reduction estimates for the CARB measure commitments in the 2022 State SIP Strategy and the proposed updates to the emissions reduction commitment. The updates are for tonnage previously associated with the ACF Regulation, Drive Forward: Heavy-Duty Trucks Measure (previously known as the Zero-Emission Trucks Measure), Transport Refrigeration Unit Regulation Part 2, and In-Use Locomotive Regulation.

[46] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[47] CARB continues to implement and enforce the portion of this regulation for which U.S. EPA granted the authorization, while the remaining <0.1 tpd NOx and <0.1 tpd ROG emissions reductions previously associated with this measure will now be associated with the Transport Refrigeration Unit Regulation Part 2.

**Table 21 – Coachella Valley Expected Emission Reductions from the 2022 State SIP Strategy**

| Proposed Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| On-Road Heavy-Duty | | |
| Advanced Clean Fleets Regulation[48] | ~~0.7~~ <0.1 | <0.1 |
| ~~Zero-Emissions~~ Drive Forward: Heavy-Duty Trucks Measure[49] | ~~0.8~~ 1.4 | ~~<0.1~~ 0.1 |
| Total On-Road Heavy-Duty Reductions | 1.5 | 0.2 |
| On-Road Light-Duty | | |
| On-Road Motorcycle New Emissions Standards | <0.1 | 0.1 |
| Clean Miles Standard | <0.1 | <0.1 |
| Total On-Road Light-Duty Reductions | <0.1 | 0.1 |
| Off-Road Equipment | | |
| Tier 5 Off-Road Vehicles and Equipment | 0.1 | NYQ |
| Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation | <0.1 | <0.1 |
| Transport Refrigeration Unit Measure ~~Regulation~~ Part 2[50] | 0.3 | <0.1 |
| Cargo Handling Equipment Amendments | <0.1 | <0.1 |
| ~~Off-Road Zero-Emission Targeted Manufacturer Rule~~ Phased Advanced Clean Equipment Regulation | NYQ[51] | NYQ |
| Clean Off-Road Fleet Recognition Program | NYQ | NYQ |
| Spark-Ignition Marine Engine Standards | <0.1 | <0.1 |
| Total Off-Road Equipment Reductions | <0.4 | 0.1 |
| Other | | |
| Consumer Products Standards | - | NYQ |
| ~~Zero-Emission Standard for~~ Clean Space and Water Heaters ~~s~~ Standards | NYQ | NYQ |
| Enhanced Regional Emission Analysis in State Implementation Plans | NYQ | NYQ |
| Pesticides: 1,3-Dichloropropene Health Risk Mitigation | - | NYQ |
| Total Other Reductions | NYQ | NYQ |
| Primarily-Federally and Internationally Regulated Sources – CARB Measures | | |
| ~~In-Use Locomotive Regulation~~[52] | ~~3.0~~ 0.0 | ~~0.1~~ 0.0 |
| Future Measures for Aviation Emission Reductions | NYQ | NYQ |
| Total Primarily-Federally and Internationally Regulated Sources – CARB Measures Reductions | ~~3.0~~ NYQ | ~~0.1~~ NYQ |
| **Aggregate Emission Reductions** | **~~5.0~~ 2.0** | **~~0.4~~ 0.3** |

Note: numbers may not add up due to rounding

[48] CARB continues to implement and enforce the portion of this regulation applicable to State and Local Fleets, as amended by CARB in September 2025, while the remaining 0.7 tpd NOx and <0.1 tpd ROG emissions reductions previously associated with this measure are now associated with the Drive Forward: Heavy-Duty Trucks Measure under development.

[49] An additional 0.7 tpd of NOx and <0.1 tpd ROG emissions reductions are now associated with this measure due to changes from the Advanced Clean Fleets Regulation.

[50] An additional <0.1 tpd NOx and <0.1 tpd ROG emissions reductions are now associated with this measure due to changes from the Transport Refrigeration Unit Part 1.

[51] NYQ means not yet quantified.

[52] For reductions previously associated with this measure, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

As mentioned earlier, the current federal administration illegally used congressional resolutions that purported to disapprove California waiver and authorizations previously granted for six CARB regulations by U.S. EPA under section 209 of the Act. Additionally, U.S. EPA took final action in January 2026 to partially approve and partially disapprove CARB's SIP submittal of the Heavy-Duty I/M regulation. Specifically, the partial disapproval is limited to SIP inclusion of portions of the regulation that address emissions in California from out-of-state and out-of-country registered vehicles. This partial disapproval does not impact CARB's ability to fully enforce and implement the Heavy-Duty I/M regulation. However, the partial disapproval further undermines CARB's ability to meet its SIP measure and emission reduction commitments because CARB cannot take SIP credit for the emission reductions from the parts of the regulation not added to the SIP.

Of the regulations affected by the adverse federal actions, ACT, Heavy-Duty Omnibus, Heavy-Duty Warranty Phase 1 and Heavy-Duty I/M were originally accounted for in the baseline emissions inventories at the time of development of the 2022 State SIP Strategy and the 2022 South Coast AQMP. Table 22 summarizes the emissions reductions originally associated with these programs, which have now been removed from the planning emissions inventories and which CARB staff are now proposing to be reallocated to commitments under 182(e)(5).

**Table 22 – Coachella Valley Emission Reductions from Regulations Removed from the Planning Emissions Inventory**

| Measure | 2037 NOx (tpd) | 2037 ROG (tpd) |
|---|---|---|
| Advanced Clean Trucks Regulation, Heavy-Duty Low-NOx Omnibus Regulation, Heavy-Duty Warranty Phase 1[53] | 0.7 | <0.1 |
| Heavy-Duty Inspection and Maintenance[54] | 1.1 | <0.1 |
| Total | **1.8** | <0.1 |

While this revision includes estimates of the emissions reductions from individual measures, CARB's overall commitment is to achieve the total emissions reductions necessary from sources in California to attain the federal air quality standards. Therefore, if a particular measure does not achieve its expected emission reductions, the State's overall commitment to achieving the total aggregate emission reductions still exists. If actual emission decreases occur that are larger than the projections reflected in the current emission inventory and the 2022 State SIP Strategy, CARB will submit an updated emissions inventory to U.S. EPA as part of a SIP revision. A new SIP revision would outline the changes that have occurred and provide appropriate

[53] For reductions previously associated with these measures, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

[54] CARB continues to fully implement and enforce the Heavy-Duty I/M regulation, but for the emissions reductions associated with the portion of the regulation that U.S. EPA did not approve into the SIP, CARB requests U.S. EPA approval under the provisions of Section 182(e)(5) of the Clean Air Act.

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.

## Planning Emissions Inventories

U.S. EPA guidance requires that planning emissions inventories submitted with attainment plans are consistent with the baseline year and milestone years within the RFP demonstration. For the planning emissions inventory for the Coachella Valley 70 ppb ozone standard, baseline emissions inventories were developed using CARB's 2022 California Emissions Projection Analysis Model (CEPAM2022) Emission Projections, Version 1.01[55].

CEPAM2022 v1.01 used 2018, the year U.S. EPA designated the South Coast as nonattainment, as the base year inventory; inventories for other years are back-cast or forecast from that base year inventory. The on-road motor vehicle emissions in the emissions inventories were generated using CARB's mobile source emissions model, EMFAC2017. On-road motor vehicle activity data reflect projections provided by the Southern California Association of Governments (SCAG) from their adopted 2020 Regional Transportation Plan/Sustainable Communities Strategy[56] (RTP/SCS). Off-road mobile source emissions were generated using CARB's OFFROAD model.

Consistent with U.S. EPA guidance requiring the RFP baseline year to be the year of the most recently available triennial National Emissions Inventory, a 2017 baseline year was used for demonstrating RFP. U.S. EPA guidance requires that inventories be developed and submitted for years that are consistent with the baseline year, 2017, and milestone years needed for the RFP demonstration[57]. The future year planning inventories needed for the RFP demonstration in the CARB Staff Report on the 2022 South Coast AQMP were 2023, 2026, 2029, 2032, 2035 and 2037.

Planning emissions inventories account for rules and regulations as adopted and in place at the time of development; for CEPAM2022 v1.01, this included CARB's ACT, Heavy-Duty Omnibus, Warranty Phase I, and Heavy-Duty I/M regulations. Due to federal actions purporting to disapprove previously-approved waivers and authorizations for the ACT, Heavy-Duty Omnibus, and Warranty Phase I regulations, and U.S. EPA's partial SIP disapproval of the Heavy-Duty I/M regulation, a revised planning emissions inventory is required for the 70 ppb ozone standard.

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[55] *Appendix A South Coast and Coachella Valley Planning Emissions Inventories*
[56] *SCAG Connect SoCal*
[57] *eCFR :: 40 CFR 51.1310 -- Requirements for reasonable further progress (RFP).*

CARB staff developed a revised version of CEPAM2022 Version 1.01 that removes the emissions reductions benefits of the regulations affected by the adverse federal actions (ACT, Heavy-Duty Omnibus, Warranty Phase I, and the portion of the Heavy-Duty I/M regulation applicable to out-of-state or out-of-country registered vehicles) which U.S. EPA will no longer allow be credited in the SIP. Aside from removal of the emissions benefits of these regulations, this planning emissions inventory is nearly identical to the one originally included in Appendix A[58] of the CARB Staff Report on the 2022 South Coast AQMP; other minor differences are seen due to updated processing within the CEPAM model.

It should be noted also that since the implementation of the effected regulations did not begin until after 2017, the revised 2017 planning emission inventories are identical to those in the CARB Staff Report on the 2022 South Coast AQMP. The revised planning emissions inventory for the Coachella Valley as applicable for the 70 ppb ozone standard is summarized in Table 23. More detail can be found in Appendix A.

**Table 23 - Revised Planning Emissions Inventory for the Coachella Valley**
(summer planning inventory, tpd)

| Year | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| **ROG** | | | | | | | |
| **Stationary and Area-wide** | 6.11 | 6.79 | 7.13 | 7.40 | 7.69 | 7.98 | 8.17 |
| **On-Road Motor Vehicles*** | 3.64 | 2.65 | 2.41 | 2.26 | 2.11 | 1.92 | 1.88 |
| **Off-Road Vehicles and Equipment** | 3.73 | 3.14 | 2.75 | 2.32 | 2.01 | 1.79 | 1.66 |
| **Total Emissions** | 13.48 | 12.58 | 12.28 | 11.97 | 11.81 | 11.68 | 11.70 |
| **NOx** | | | | | | | |
| **Stationary and Area-wide** | 1.35 | 1.59 | 1.54 | 1.43 | 1.39 | 1.40 | 1.39 |
| **On-Road Motor Vehicles*** | 10.43 | 5.90 | 4.69 | 4.40 | 4.29 | 4.30 | 4.39 |
| **Off-Road Vehicles and Equipment** | 7.64 | 5.88 | 5.90 | 6.05 | 6.09 | 5.84 | 5.33 |
| **Total Emissions** | 19.42 | 13.37 | 12.13 | 11.89 | 11.78 | 11.53 | 11.12 |

## Reasonable Further Progress Demonstration

With the revision to the planning emissions inventories for the 2022 South Coast AQMP, a revised RFP demonstration for the Coachella Valley is also needed. The new RFP demonstration must use the revised planning emissions inventory in order to account for the adverse federal actions and also demonstrate that RFP is maintained when accounting for any differences between the updated planning emissions inventories and the updated MVEBs developed using EMFAC2021 (updates discussed in more detail below); to do this, the revised RFP demonstration includes an adjustment to account for the changes to on-road emissions predicted by the new

[58] *Appendix A South Coast and Coachella Valley Planning Emissions Inventories*

transportation model, EMFAC2021. To be conservative in the adjustment regarding the use of the EMFAC2021 transportation model, only increases in the differences between EMFAC2017 and EMFAC2021 are included in the RFP demonstration below.

The revised RFP demonstration for the Coachella Valley 70 ppb ozone standard in Table 24 uses the CEPAM2022 v1.01 ("revised" 2026) planning emissions discussed above and applies a line item adjustment. The adjustment is to demonstrate RFP is maintained with the revised MVEBs and accounts for emissions increases, if any, resulting from the updated MVEBs based on the newer transportation model, EMFAC2021.

**Table 24 - Revised Coachella Valley RFP Demonstration**
(summer planning inventory, tpd)

| Year | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ROG emissions* | 13.48 | 12.58 | 12.28 | 11.97 | 11.81 | 11.68 | 11.70 |
| EMFAC2021 adjustment | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adjusted Baseline ROG | 13.48 | 12.58 | 12.28 | 11.97 | 11.81 | 11.68 | 11.70 |
| Required % change since 2017 | | 18.0% | 27.0% | 36.0% | 45.0% | 54.0% | 60.0% |
| Target ROG Level | | 11.05 | 9.84 | 8.63 | 7.41 | 6.20 | 5.39 |
| Shortfall (-)/ Surplus (+) in ROG | | -1.53 | -2.44 | -3.35 | -4.40 | -5.48 | -6.31 |
| Shortfall (-)/ Surplus (+) in ROG, % | | -11.3% | -18.1% | -24.8% | -32.7% | -40.7% | -46.8% |
| **Year** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| NOx emissions | 19.42 | 13.37 | 12.13 | 11.89 | 11.78 | 11.53 | 11.12 |
| EMFAC2021 adjustment | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Section 182(e)(5) RFP commitment | | 0.00 | 0.00 | 0.00 | 0.00 | -0.01 | -0.78 |
| Adjusted Baseline NOx | 19.42 | 13.37 | 12.13 | 11.89 | 11.78 | 11.52 | 10.33 |
| Change in NOx since 2017 | | 6.05 | 7.29 | 7.53 | 7.65 | 7.90 | 9.09 |
| Change in NOx since 2017, % | | 31.2% | 37.5% | 38.8% | 39.4% | 40.7% | 46.8% |
| NOx reductions since 2017 used for ROG substitution in this milestone year, % | | 11.3% | 18.1% | 24.8% | 32.7% | 40.7% | 46.8% |
| NOx reductions since 2017 surplus after meeting ROG substitution needs in this milestone year, % | | 19.8% | 19.4% | 13.9% | 6.7% | 0.0% | 0.00% |
| RFP shortfall (-), if any | | 0% | 0% | 0% | 0% | 0% | 0% |
| RFP Met? | | YES | YES | YES | YES | YES | YES |

Note: numbers may not add up due to rounding

Table24 demonstrates that ROG and NOx emission reductions in the revised planning emissions inventories meet the RFP targets for the 70 ppb ozone standard in the 2023, 2026, 2029, and 2032 milestone years, and, when accounting for the

proposed 182(e)(5) commitment, in the 2035 milestone year and the 2037 attainment year. In addition,

Table 24 demonstrates consistency between the RFP and EMFAC2021 by including a line-item adjustment to account for the differences in the on-road mobile source emissions projections in the CEPAM inventory and the MVEBs which are rounded up to the nearest tenth of a ton per day (see below for more information on the MVEBs).

## Motor Vehicle Emissions Budgets

As discussed in Chapter 1, the portion of the total emissions inventory attributable to on-road motor vehicles is identified by the Act for transportation conformity purposes and used to establish MVEB[59]. Section 176(c) of the Act establishes transportation conformity requirements using MVEBs to ensure that transportation activities do not interfere with a region's air quality progress.

SCAG prepares a long range RTP at least every four years and a short range funding program, or Regional Transportation Improvement Program (RTIP), every two years. Before adopting the RTP or RTIP, SCAG prepares a regional emissions analysis using the proposed plan and program as specified in the federal conformity regulation[60] and compares those emissions to the MVEBs approved in the SIP. The MPO may determine the RTP/RTIP conforms if the emissions from the proposed actions are less than the MVEBs in the SIP. The conformity determination also signifies that the MPO has met other transportation conformity requirements such as interagency consultation and financial constraint.

The CARB Staff Report on the 2022 South Coast AQMP established MVEBs for ROG and NOx emissions in the 70 ppb ozone milestone years using emission rates from EMFAC2017 and activity data (VMT and speed distributions) from SCAG 2020 RTP/SCS[61]. The MVEBs were consistent with the originally-submitted planning emission inventory in the CARB Staff Report on the 2022 South Coast AQMP and control measures in the 2022 South Coast AQMP and included reductions from recently adopted regulations in all milestone years as well as commitments for additional regulations in the attainment year, (see Chapter 7 of the 2022 South Coast AQMP for additional details[62]).

With the revision to the baseline emissions inventory to remove the emission reductions from several on-road mobile source regulations resulting from federal

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[59] Federal transportation conformity regulations are found in 40 CFR Parts 51 and 93 – Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Titles 23 or 49 of the United States Code.

[60] 40 CFR Parts 51 and 93, *eCFR :: 40 CFR Part 93 -- Determining Conformity*

[61] *SCAG Connect SoCal 2020 RTP/SCS*

[62] *2022 South Coast AQMP, chapter 7*

actions, the MVEBs in the Coachella Valley for the 70 ppb ozone standard must also be revised. In addition to revising the MVEBs to account for the federal actions, the revision must also use the latest motor vehicle emissions model approved by U.S. EPA, EMFAC2021, which is now required to be used for use for all conformity purposes, as well as the latest activity data approved by SCAG.

The MVEBs in Table 25 were developed for a summer average day emissions consistent with the RFP demonstration and the attainment demonstration, using the following methodology:

1. Used the EMFAC2021 model to produce the on-road motor vehicle emissions (average summer day) for the appropriate pollutants (ROG and NOx) using SCAG 2025 FSTIP (2024 RTP equivalent) data;
2. Applied the Off-Model Adjustment Factors to reflect the illegal federal actions purporting to disapprove the Clean Air Act waivers for the ACT and Omnibus regulations and accounting for only the SIP-approved portion of the Heavy-Duty I/M Regulation; and
3. Rounded up the totals for ROG and NOx to the nearest tenth of a ton.

**Table 25 - Updated MVEBs for the Coachella Valley**
(summer planning inventory, tpd)

| | 2026 | | 2029 | | 2032 | | 2035 | | 2037 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx | ROG | NOx |
| **Vehicular Exhaust** | 2.15 | 4.02 | 1.95 | 3.77 | 1.81 | 3.61 | 1.74 | 3.55 | 1.70 | 3.55 |
| **Reductions removed from affected regulations[a]** | 0 | 0.07 | 0 | 0.19 | 0.01 | 0.32 | 0.01 | 0.45 | 0.01 | 0.52 |
| **Reductions from HD I/M[b]** | 0 | -0.68 | 0 | -0.82 | 0 | -0.91 | 0 | -0.98 | 0 | -1.02 |
| **Total[c]** | 2.15 | 3.41 | 1.95 | 3.14 | 1.82 | 3.03 | 1.75 | 3.02 | 1.72 | 3.05 |
| **Motor Vehicle Emissions Budget[d]** | 2.2 | 3.5 | 2.0 | 3.2 | 1.9 | 3.1 | 1.8 | 3.1 | 1.8 | 3.1 |

[a] This reflects increases from the removal of Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Omnibus, and Warranty Phase I Regulations adjustment factors approved by USEPA on November 21, 2025.

[b] This reflects reductions from the SIP-approved portion of the Heavy Duty Inspection/Maintenance Regulation. CARB submitted the adjustment factor to U.S. EPA for approval on March 26, 2026..

[c] Values may not add up due to rounding.

[d] Motor Vehicle Emission Budgets calculated are rounded up to the nearest tpd for emissions greater than 20 tpd, and to the nearest tenth of a tpd for emissions lower than 20 tpd.

Source: EMFAC2021 v1.02

The revised MVEBs were established according to the methodology outlined above and in consultation with the SCAG, the South Coast AQMD, U.S. EPA, Federal Highway Administration, and Federal Transit Administration. These MVEBs will be effective once approved by the U.S. EPA.

As mentioned above, the U.S. EPA can only approve updates to MVEBs if it is demonstrated that the new MVEBs do not interfere with the RFP or attainment demonstrations. As discussed in the RFP section above, the revised MVEBs do not interfere with the Coachella Valley's ability to meet RFP; as demonstrated below, the revised MVEBs do not interfere with the Coachella Valley's ability to attain the 70 ppb ozone standard by the required attainment date.

## Consistency with Attainment Demonstration

To demonstrate that the updated MVEBs developed using the newer on-road emissions model, EMFAC2021, do not interfere with the attainment demonstration, the rate of on-road emission changes predicted from the modeled base year, 2018, to the attainment year, 2037, in CEPAM2022v1,01 ("revised" 2026) is compared to that predicted by EMFAC2021. As discussed above, the on-road emissions in CEPAM2022 v1.01 ("revised" 2026) was developed using EMFAC2017 and updated to account for recent federal actions by removing the emissions reduction benefits of regulations for which U.S. EPA will no longer allow areas to take credit in the attainment plans. Off-model adjustments to EMFAC2021 have also been developed to account for the adverse federal actions and reductions that cannot be credited. As such, EMFAC2021 and CEPAM2022 v1.01 ("revised" 2026) account for the same on-road vehicle regulations and thus a comparison will demonstrate if the update to the EMFAC model shows an increase in emissions in the attainment year which would call into question the attainment demonstration for Coachella Valley in the 2022 South Coast AQMP.

As demonstrated in Table 26, EMFAC2021 predicts the rate of both on-road NOx reductions and on-road ROG reductions from 2018 to 2037 to be significantly greater in comparison to that of CEPAM2022 v1.01 ("revised" 2026). On-road mobile source emissions developed using EMFAC2021 show a 47% reduction in ROG emissions and a 63% reduction in NOx emissions in 2037 compared to 2018 levels – this results in an increased rate of 2% ROG reductions and 7% NOx reductions in 2037 compared to the rate of reductions in mobile sources emissions in CEPAM2022v1.01 ("revised" 2026) derived using the EMFAC2017 model. Thus, this analysis demonstrates that the updated MVEBs do not interfere with the attainment demonstration as submitted in the 2022 South Coast AQMP.

**Table 26 - Coachella Valley Rate of Emissions Reduction Comparison, EMFAC2017 to and EMFAC2021**
(summer planning inventory, tpd)

| | | Change in on-road | |
|---|---|---|---|
| | | ROG | NOx |
| **CEPAM2022v1.01 ("revised" 2026) (EMFAC2017)** | 2018 | 3.4 | 9.8 |
| | 2037 | 1.9 | 4.4 |
| **EMFAC2017 Percentage Reductions** | | 45% | 55% |
| **Updated MVEBs (EMFAC2021)** | 2018 | 3.4 | 8.3 |
| | 2037 | 1.8 | 3.1 |
| **EMFAC2021 Percentage Reductions** | | 47% | 63% |
| **Difference in Percentage Reductions (EMFAC2021-EMFAC2017)** | | 2% | 7% |

## Summary of SIP Revision for Coachella Valley

As a result of the unprecedented and illegal federal actions purporting to disapprove the waivers and authorizations granted under the Clean Air Act and the disapproval or delayed approval of submitted State regulations, CARB is proposing to revise SIP elements originally submitted to U.S. EPA in 2023 for Coachella Valley in the 2022 South Coast AQMP and the CARB Staff Report on the 2022 South Coast AQMP. Specifically, CARB is revising the emissions reduction commitments associated with State measures used to demonstrate attainment of the 70 ppb ozone standard, the planning emissions inventories, the RFP demonstration, and the MVEBs.

# Chapter 6: Environmental Impacts

## Introduction

This chapter provides the basis for CARB's determination that no subsequent or supplemental environmental analysis is required for the 2026 State Implementation Plan Revisions for the California Extreme Ozone Nonattainment Areas (Project). A brief explanation of this determination is provided in subsection C 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 Cal. Code Regs., tit. 14, § 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 Cal. Code Regs., tit. 17, §§ 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.

## Prior Environmental Analysis

When the 2022 State SIP Strategy was proposed, CARB prepared an environmental analysis (EA) under its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000-60008) to comply with the requirements of CEQA (Pub. Res. Code, § 21080.5). The EA, included as Appendix B to the Proposed 2022 State SIP Strategy and titled Final Environmental Analysis for the proposed 2022 State SIP Strategy for the State Implementation Plan (Final EA), dated September 16, 2022, 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.

# The Proposed Regulatory Action

## Summary

The 2022 State SIP Strategy included CARB commitments to pursue a variety of new measures for on-road mobile, off-road mobile, and other sources of emissions. The 2022 State SIP Strategy measures and associated emissions reduction commitments were incorporated into regional attainment plans for the 70 parts ber billion (ppb) ozone standard. However, over the last year, California's clean air progress has been undermined by unprecedented federal interference, including the illegal attempts at disapproval of major emissions standards and other regulations.

In response to these unprecedented and illegal federal actions, the Project is proposing revisions to the write-ups and schedule for certain measure commitments originally included in the 2022 State SIP Strategy and commitments to achieve emissions reductions for nonattainment areas in California for the 70 ppb ozone standard. The federal interference changed the path on which emission reductions are going to be achieved to support attainment across California. The U.S. Environmental Protection Agency (U.S. EPA) has not acted on the regional attainment plans for the 70 ppb ozone standard or the 2022 State SIP Strategy commitments. Therefore, the Project proposes updates to the 2022 State SIP Strategy commitments for the regional attainment plans to account for these federal actions and reallocate the emissions reductions to other commitments to support U.S. EPA approval. Specifically, CARB is only updating commitments related to the Advanced Clean Cars (ACC) II, Advanced Clean Fleets (ACF), Advanced Clean Trucks (ACT), Heavy-Duty Omnibus, Heavy-Duty Warranty and Maintenance Provisions, Commercial Harbor Craft (CHC), Transportation Refrigeration Units (TRU) Part I, Heavy-Duty Inspection and Maintenance, In-Use Locomotive Regulations, and limited other measures. The Project updates the State commitments to pursue measures and to achieve emissions reductions such that the total emissions reductions accounted for in each attainment demonstration, between those accounted for in the emissions inventories and from CARB commitments, is maintained for each Extreme ozone nonattainment area in California.

In addition to revising the commitments, this document also proposes revisions to the planning emissions inventories, reasonable further progress (RFP) demonstrations, and motor vehicle emission budgets (MVEBs) for these areas. The Project is not proposing to add any new commitments not already analyzed in the Final EA; instead, the Project proposes removing reference to commitments in the 2022 State SIP Strategy that are currently unobtainable due to the unlawful federal actions against them as well as making revisions to limited other commitments to reflect the current state of proposals including delays related to the adverse federal actions.

## Compliance Responses

There would be no changes to compliance responses already analyzed in the Final EA in response to the project. Implementation of the project would not have any effect on compliance responses already taking place.

# 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 (Cal. Code Regs., tit. 14, § 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 (Cal. Code Regs., tit. 14, § 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 (Cal. Code Regs., tit. 14, § 15164(c), (d)).

## Basis for Determination

CARB staff has determined that the 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. Further, there are no changes in circumstances or new information that would otherwise warrant any subsequent or supplemental environmental review. The Final EA adequately addresses the implementation of the 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 Final EA which require major revisions involving new significant environmental effects or a substantial increase in the severity of previously identified effects.*

The 2022 State SIP Strategy included CARB commitments to pursue a variety of new measures for on-road mobile, off-road mobile, and other sources of emissions. However, over the last year, California's clean air progress has been undermined by unprecedented federal interference, including the illegal attempts at disapproval of major emissions standards and other regulations. In response to these unprecedented and illegal federal actions, CARB is proposing revisions to the measure commitments originally included in the 2022 State SIP Strategy and commitments to achieve emissions reductions for nonattainment areas in California for the 70 ppb ozone standard. In addition to revising the commitments, this document also proposes revisions to the planning emissions inventories, RFP demonstrations, and MVEBs for these areas. CARB is not proposing to add any new

commitments not already analyzed in the Final EA and instead is removing reference to commitments in the 2022 State SIP Strategy that are currently unobtainable due to the unlawful federal actions against them as well as making revisions to limited other commitments to reflect the current state of proposals including delays related to the adverse federal actions, as described in the staff report and section C above. The Project maintains commitments for emissions reductions to ensure air quality benefits are preserved, so there will be no environmental effects or changes in severity of previously identified effects. As such the Final EA fully addresses the implementation of the project, and no additional environmental analysis is required. CARB has determined that the 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.

*(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 substantial changes to the environmental settings or circumstances in which the project is being implemented compared to that analyzed in the Final EA. CARB has determined that the 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. As noted above, CARB is not proposing to add any new commitments not already analyzed in the Final EA and instead is removing reference to commitments in the 2022 State SIP Strategy that are currently unobtainable due to the unlawful federal actions against them as well as making revisions to a limited number of commitments to reflect the current state of proposals including delays related to the adverse federal actions, as described in the staff report and Section C above. Therefore, the project does not substantially alter the compliance responses for the 2022 State SIP Strategy or result in any changes that significantly affect the physical environment.

*(3) 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 of substantial importance that has become available to CARB staff since the Final EA was certified in September 2022, that would alter any of the conclusions of the Final EA relating to significant environmental impacts. Additionally, there are no feasible mitigation measures or alternatives that were previously found to be infeasible, nor any new mitigation measures or alternatives considerably different from those previously considered in the Final EA. As discussed

above, CARB is not proposing to add any new commitments not already analyzed in the Final EA and instead is removing reference to commitments in the 2022 State SIP Strategy that are currently unobtainable due to the unlawful federal actions against them as well as making revisions to limited other commitments to reflect the current state of proposals including delays related to the adverse federal actions, as described by the staff report and Section C above. Therefore, the conclusions found in the Final EA about the compliance responses for the 2022 State SIP Strategy or potential environmental impacts to any resource areas have not changed.

In summary, no supplemental or subsequent environmental analysis is required for these proposed modifications because, as described above, the project does not result in any new environmental impacts or in a substantial increase in severity to the impacts previously disclosed in the Final EA. Further, there are no changes in circumstances or new information that would otherwise warrant an additional environmental review.

# Chapter 7: Staff Recommendations

CARB staff has reviewed the plans submitted to U.S. EPA in 2023 for the South Coast, San Joaquin Valley, and Coachella Valley and has concluded that, together with the revisions in the 2026 Extreme Ozone SIP Revision, these plans meet the requirements of the Act under the 70 ppb ozone standard.

CARB staff recommends that the Board:

1. Adopt the 2026 Extreme Ozone SIP Revision, including the following:
    a. Revised commitments to pursue certain SIP measures or otherwise address each measure as described in the 2026 Extreme Ozone SIP Revision by the dates specified;
    b. Revised commitments to achieve aggregate emissions reductions of 106.8 tpd of NOx and 18.7 tpd of ROG in the South Coast by 2037, including a subset for which CARB requests approval under the 182(e)(5) provision of the Act of 78.2 tpd of NOx and 4.5 tpd of ROG, planning emissions inventories, RFP demonstrations, and MVEBs as detailed in Chapter 3 and applicable for the 70 ppb ozone standard;
    c. Revised commitments to achieve aggregate emissions reductions of 36.9 tpd of NOx and 4.5 tpd of ROG in the San Joaquin Valley by 2037, including a subset for which CARB requests approval under the 182(e)(5) provision of the Act of 23.6 tpd of NOx and 1.8 tpd of ROG, planning emissions inventories, RFP demonstrations, and MVEBs as detailed in Chapter 4 and applicable for the 70 ppb ozone standard; and
    d. Revised commitments to achieve aggregate emissions reductions of 7.1 tpd of NOx and 0.6 tpd of ROG in the Coachella Valley by 2037, including a subset for which CARB requests approval under the 182(e)(5) provision of the Act of 5.1 tpd of NOx and 0.3 tpd of ROG, and a subset to support RFP for which CARB requests approval under 182(e)(5) of the Act of 0.78 tpd of NOx in 2037 and 0.01 tpd of NOx in 2035; planning emissions inventories; RFP demonstrations; and MVEBs as detailed in Chapter 5 and applicable for the 70 ppb ozone standard.
2. Direct the Effective Officer to submit the 2026 Extreme Ozone SIP Revision to U.S. EPA as a revision to the California SIP.
3. Direct the Executive Officer to work with the districts and U.S. EPA and take appropriate action to resolve any completeness or approvability issues that may arise regarding the SIP submission, including to revise the commitments to utilize section 182(e)(5) of the Clean Air Act to address any deficit in the reductions needed to demonstrate attainment, RFP, or other SIP elements.

# Appendix A

Planning Emissions Inventories

South Coast, San Joaquin Valley and Coachella Valley

Emission inventories included in Appendix A were prepared for inclusion in the California SIP as planning tools to be used in the preparation of reasonable further progress demonstrations. These planning inventories will supplement or replace the planning inventories submitted in 2023 as part of each attainment area plan for the 70 ppb ozone standard.

The emission inventories included in Appendix A are based on California Emission Projection Analysis Model (CEPAM), 2022 State Implementation Plan (SIP) Emission Projections, Version 1.01 ("revised" 2026) for the South Coast Air Basin and Coachella Valley. For the San Joaquin Valley, the emissions inventories are based on CEPAM2019 Version 1.04 ("revised" 2026).

The "revised" CEPAMs are based on the original CEPAM2022 v1.01 for Southern California and CEPAM2019 v1.04 for Northern California emissions inventories included in the plans submitted for the 70 ppb. While the stationary and area source emissions in the "revised" inventories are consistent with those in the plans, modified external adjustments have been applied for the on-road inventory to remove the emissions reductions benefits of the regulations affected by the adverse federal actions (ACT, Heavy-Duty Omnibus, Warranty Phase I, and the portion of the Heavy-Duty I/M regulation applicable to out-of-state or out-of-country registered vehicles) which U.S. EPA will no longer allow be credited in the SIP. The external adjustments now applied include combined adjustments for CARB's Innovative Clean Transit Regulation for Urban Buses, (ICT_UBUS), Heavy-Duty Vehicle Inspection Program and Periodic Smoke Inspection Program (Opacity); and the "partial" application of Heavy-Duty I/M regulation accounting for the partial approval of the regulation by U.S. EPA. Aside from removal of the emissions benefits of these regulations, these planning emissions inventories are nearly identical to the ones originally included with the plans submitted in 2023; other minor differences may be seen due to updated processing within the CEPAM model.

# Emission Projections by Summary Category

Season: Summer

## South Coast Air Basin ROG Emissions (out to 3 nautical miles)

Source: CEPAM2022 v1.01 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 0.39 | 0.35 | 0.32 | 0.28 | 0.27 | 0.27 | 0.27 |
| COGENERATION | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| OIL AND GAS PRODUCTION (COMBUSTION) | 0.09 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 | 0.19 |
| PETROLEUM REFINING (COMBUSTION) | 1.25 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 |
| MANUFACTURING AND INDUSTRIAL | 0.91 | 0.95 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 |
| FOOD AND AGRICULTURAL PROCESSING | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| SERVICE AND COMMERCIAL | 1.89 | 1.95 | 1.97 | 1.99 | 2.01 | 2.02 | 2.04 |
| OTHER (FUEL COMBUSTION) | 0.68 | 0.66 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 |
| **TOTAL FUEL COMBUSTION** | 5.27 | 5.50 | 5.54 | 5.54 | 5.54 | 5.55 | 5.56 |
| SEWAGE TREATMENT | 0.36 | 0.29 | 0.29 | 0.29 | 0.30 | 0.30 | 0.31 |
| LANDFILLS | 8.52 | 8.96 | 9.15 | 9.32 | 9.48 | 9.64 | 9.73 |
| INCINERATORS | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| SOIL REMEDIATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (WASTE DISPOSAL) | 7.67 | 7.83 | 7.94 | 8.02 | 8.08 | 8.12 | 8.14 |
| **TOTAL WASTE DISPOSAL** | 16.60 | 17.12 | 17.41 | 17.68 | 17.90 | 18.10 | 18.22 |
| LAUNDERING | 0.17 | 0.17 | 0.18 | 0.18 | 0.18 | 0.19 | 0.19 |
| DEGREASING | 12.50 | 13.37 | 13.65 | 13.79 | 13.70 | 13.61 | 13.54 |
| COATINGS AND RELATED PROCESS SOLVENTS | 17.52 | 19.52 | 20.17 | 20.58 | 20.74 | 20.90 | 21.01 |
| PRINTING | 0.82 | 0.81 | 0.85 | 0.87 | 0.88 | 0.89 | 0.89 |
| ADHESIVES AND SEALANTS | 4.96 | 4.58 | 4.67 | 4.71 | 4.68 | 4.65 | 4.62 |
| OTHER (CLEANING AND SURFACE COATINGS) | 0.61 | 0.65 | 0.66 | 0.66 | 0.66 | 0.65 | 0.65 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 36.58 | 39.10 | 40.17 | 40.79 | 40.84 | 40.88 | 40.90 |
| OIL AND GAS PRODUCTION | 2.25 | 2.95 | 3.35 | 3.77 | 4.00 | 4.28 | 4.47 |
| PETROLEUM REFINING | 4.40 | 4.44 | 4.44 | 4.44 | 4.44 | 4.44 | 4.44 |
| PETROLEUM MARKETING | 14.21 | 12.69 | 12.06 | 11.61 | 11.34 | 11.20 | 11.16 |
| OTHER (PETROLEUM PRODUCTION AND | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| **TOTAL PETROLEUM PRODUCTION AND** | 20.90 | 20.11 | 19.89 | 19.86 | 19.82 | 19.97 | 20.10 |
| CHEMICAL | 4.23 | 4.60 | 4.69 | 4.72 | 4.67 | 4.63 | 4.60 |
| FOOD AND AGRICULTURE | 0.58 | 0.55 | 0.56 | 0.57 | 0.58 | 0.58 | 0.58 |
| MINERAL PROCESSES | 0.35 | 0.42 | 0.43 | 0.44 | 0.45 | 0.45 | 0.46 |
| METAL PROCESSES | 0.09 | 0.11 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| WOOD AND PAPER | 0.23 | 0.25 | 0.25 | 0.25 | 0.25 | 0.26 | 0.26 |
| GLASS AND RELATED PRODUCTS | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 |
| ELECTRONICS | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| OTHER (INDUSTRIAL PROCESSES) | 5.09 | 5.17 | 5.22 | 5.27 | 5.31 | 5.35 | 5.37 |
| **TOTAL INDUSTRIAL PROCESSES** | 10.58 | 11.11 | 11.29 | 11.40 | 11.40 | 11.41 | 11.42 |
| **TOTAL STATIONARY** | 89.93 | 92.94 | 94.31 | 95.26 | 95.51 | 95.90 | 96.20 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 105.39 | 111.93 | 116.27 | 120.11 | 124.99 | 129.28 | 132.36 |
| ARCHITECTURAL COATINGS AND RELATED | 10.51 | 11.24 | 11.53 | 11.78 | 12.04 | 12.29 | 12.44 |
| PESTICIDES/FERTILIZERS | 1.11 | 1.14 | 1.15 | 1.16 | 1.17 | 1.18 | 1.19 |
| ASPHALT PAVING / ROOFING | 1.15 | 1.26 | 1.30 | 1.33 | 1.36 | 1.39 | 1.41 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **TOTAL SOLVENT EVAPORATION** | 118.16 | 125.56 | 130.25 | 134.38 | 139.56 | 144.15 | 147.40 |
| RESIDENTIAL FUEL COMBUSTION | 2.25 | 2.31 | 2.28 | 2.25 | 2.24 | 2.23 | 2.23 |
| FARMING OPERATIONS | 2.00 | 1.42 | 1.39 | 1.36 | 1.34 | 1.32 | 1.30 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 |
| MANAGED BURNING AND DISPOSAL | 0.21 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| COOKING | 1.07 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 | 1.21 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 5.82 | 5.36 | 5.32 | 5.28 | 5.26 | 5.26 | 5.26 |
| **TOTAL AREAWIDE** | 123.97 | 130.92 | 135.57 | 139.66 | 144.82 | 149.41 | 152.67 |

## Mobile Sources

| **SUMMARY CATEGORY NAME** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 33.54 | 20.34 | 17.22 | 15.19 | 13.39 | 12.04 | 11.31 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 8.67 | 5.42 | 4.44 | 3.69 | 2.92 | 2.42 | 2.19 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 15.97 | 11.00 | 9.67 | 8.68 | 7.66 | 6.73 | 6.21 |
| MEDIUM DUTY TRUCKS (MDV) | 13.93 | 9.10 | 7.63 | 6.65 | 5.82 | 5.21 | 4.93 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 2.80 | 1.55 | 1.26 | 1.12 | 0.92 | 0.60 | 0.57 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.39 | 0.23 | 0.18 | 0.15 | 0.12 | 0.10 | 0.09 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 0.56 | 0.34 | 0.29 | 0.27 | 0.25 | 0.25 | 0.25 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 | 0.28 | 0.18 | 0.15 | 0.13 | 0.12 | 0.11 | 0.11 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 | 0.10 | 0.07 | 0.06 | 0.05 | 0.05 | 0.05 | 0.04 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS | 1.29 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 2.56 | 0.79 | 0.84 | 0.86 | 0.88 | 0.91 | 0.94 |
| MOTORCYCLES (MCY) | 8.14 | 8.55 | 8.61 | 8.73 | 8.80 | 9.01 | 9.19 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 0.26 | 0.06 | 0.06 | 0.05 | 0.04 | 0.02 | 0.02 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - GAS (SBG) | 0.04 | 0.05 | 0.05 | 0.06 | 0.07 | 0.07 | 0.07 |
| SCHOOL BUSES - DIESEL (SBD) | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| OTHER BUSES - GAS (OBG) | 0.11 | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| OTHER BUSES - MOTOR COACH - DIESEL | 0.05 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MOTOR HOMES (MH) | 0.09 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 88.90 | 57.90 | 50.69 | 45.83 | 41.22 | 37.71 | 36.12 |
| AIRCRAFT | 3.83 | 3.35 | 3.55 | 3.75 | 3.89 | 3.90 | 3.90 |
| TRAINS | 0.66 | 0.69 | 0.70 | 0.72 | 0.71 | 0.67 | 0.61 |
| OCEAN GOING VESSELS | 8.54 | 8.51 | 8.59 | 8.66 | 8.73 | 8.80 | 8.82 |
| COMMERCIAL HARBOR CRAFT | 0.22 | 0.22 | 0.22 | 0.21 | 0.20 | 0.20 | 0.19 |
| RECREATIONAL BOATS | 23.51 | 18.10 | 16.01 | 14.29 | 12.84 | 11.60 | 10.76 |
| OFF-ROAD RECREATIONAL VEHICLES | 1.64 | 1.41 | 1.27 | 1.08 | 0.94 | 0.83 | 0.77 |
| OFF-ROAD EQUIPMENT | 61.10 | 55.61 | 46.37 | 35.54 | 28.52 | 23.73 | 21.25 |
| OFF-ROAD EQUIPMENT (PERP) | 0.80 | 0.53 | 0.50 | 0.48 | 0.50 | 0.52 | 0.54 |
| FARM EQUIPMENT | 0.71 | 0.30 | 0.25 | 0.20 | 0.16 | 0.13 | 0.11 |
| FUEL STORAGE AND HANDLING | 8.82 | 7.17 | 6.64 | 6.28 | 6.06 | 5.99 | 6.00 |
| **TOTAL OTHER MOBILE SOURCES** | 109.84 | 95.89 | 84.08 | 71.20 | 62.54 | 56.35 | 52.95 |
| **TOTAL MOBILE** | 198.75 | 153.78 | 134.77 | 117.04 | 103.76 | 94.05 | 89.07 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **Grand Total** | 412.65 | 378.09 | 364.64 | 351.96 | 344.08 | 339.36 | 337.94 |

## South Coast Air Basin NOx Emissions (out to 3 nautical miles)

Source: CEPAM2022 v1.01 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 2.35 | 3.49 | 3.14 | 2.74 | 2.57 | 2.54 | 2.57 |
| COGENERATION | 0.09 | 0.04 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 |
| OIL AND GAS PRODUCTION (COMBUSTION) | 1.17 | 0.86 | 0.87 | 0.93 | 0.96 | 0.96 | 0.97 |
| PETROLEUM REFINING (COMBUSTION) | 10.15 | 6.87 | 5.34 | 4.51 | 4.15 | 3.90 | 3.90 |
| MANUFACTURING AND INDUSTRIAL | 10.33 | 8.17 | 8.39 | 8.24 | 8.10 | 7.93 | 7.87 |
| FOOD AND AGRICULTURAL PROCESSING | 0.41 | 0.42 | 0.42 | 0.43 | 0.42 | 0.40 | 0.40 |
| SERVICE AND COMMERCIAL | 8.95 | 9.77 | 9.82 | 9.90 | 9.95 | 9.94 | 9.99 |
| OTHER (FUEL COMBUSTION) | 3.16 | 2.73 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 |
| **TOTAL FUEL COMBUSTION** | 36.60 | 32.33 | 30.68 | 29.44 | 28.85 | 28.37 | 28.39 |
| SEWAGE TREATMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| LANDFILLS | 0.41 | 0.45 | 0.41 | 0.41 | 0.41 | 0.42 | 0.42 |
| INCINERATORS | 1.32 | 1.18 | 1.21 | 1.23 | 1.24 | 1.25 | 1.26 |
| SOIL REMEDIATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (WASTE DISPOSAL) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL WASTE DISPOSAL** | 1.74 | 1.64 | 1.63 | 1.65 | 1.66 | 1.68 | 1.69 |
| LAUNDERING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DEGREASING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COATINGS AND RELATED PROCESS SOLVENTS | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PRINTING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ADHESIVES AND SEALANTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (CLEANING AND SURFACE COATINGS) | 0.06 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 0.06 | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| OIL AND GAS PRODUCTION | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| PETROLEUM REFINING | 1.01 | 0.78 | 0.68 | 0.61 | 0.58 | 0.55 | 0.56 |
| PETROLEUM MARKETING | 0.05 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| OTHER (PETROLEUM PRODUCTION AND | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL PETROLEUM PRODUCTION AND** | 1.09 | 0.82 | 0.72 | 0.65 | 0.62 | 0.59 | 0.59 |
| CHEMICAL | 0.10 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| FOOD AND AGRICULTURE | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| MINERAL PROCESSES | 0.37 | 0.45 | 0.48 | 0.48 | 0.48 | 0.47 | 0.47 |
| METAL PROCESSES | 0.25 | 0.26 | 0.32 | 0.33 | 0.34 | 0.34 | 0.34 |
| WOOD AND PAPER | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| GLASS AND RELATED PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ELECTRONICS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (INDUSTRIAL PROCESSES) | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| **TOTAL INDUSTRIAL PROCESSES** | 0.74 | 0.84 | 0.94 | 0.95 | 0.95 | 0.94 | 0.94 |
| **TOTAL STATIONARY** | 40.22 | 35.68 | 34.01 | 32.73 | 32.11 | 31.62 | 31.65 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ARCHITECTURAL COATINGS AND RELATED | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PESTICIDES/FERTILIZERS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ASPHALT PAVING / ROOFING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL SOLVENT EVAPORATION** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESIDENTIAL FUEL COMBUSTION | 11.39 | 11.69 | 10.97 | 10.28 | 9.85 | 9.65 | 9.51 |
| FARMING OPERATIONS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| MANAGED BURNING AND DISPOSAL | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| COOKING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 11.55 | 11.87 | 11.15 | 10.46 | 10.03 | 9.82 | 9.69 |
| **TOTAL AREAWIDE** | 11.55 | 11.87 | 11.15 | 10.46 | 10.03 | 9.82 | 9.69 |

## Mobile Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 24.32 | 11.84 | 9.33 | 8.08 | 7.35 | 7.01 | 6.92 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 6.05 | 2.99 | 2.21 | 1.71 | 1.31 | 1.11 | 1.05 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 15.85 | 7.26 | 5.42 | 4.38 | 3.69 | 3.24 | 3.02 |
| MEDIUM DUTY TRUCKS (MDV) | 14.10 | 6.29 | 4.31 | 3.22 | 2.59 | 2.25 | 2.13 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 2.39 | 1.20 | 0.90 | 0.70 | 0.57 | 0.50 | 0.47 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.37 | 0.20 | 0.16 | 0.12 | 0.10 | 0.09 | 0.08 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 1.02 | 0.46 | 0.34 | 0.27 | 0.24 | 0.23 | 0.23 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.06 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 | 8.57 | 3.94 | 2.64 | 1.75 | 1.18 | 0.82 | 0.64 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 | 2.83 | 1.34 | 0.92 | 0.64 | 0.47 | 0.36 | 0.31 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS | 24.55 | 9.17 | 7.74 | 7.26 | 6.96 | 6.67 | 6.57 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 60.66 | 33.59 | 25.36 | 23.46 | 22.50 | 22.15 | 22.28 |
| MOTORCYCLES (MCY) | 1.87 | 2.04 | 2.07 | 2.10 | 2.10 | 2.13 | 2.16 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 2.11 | 0.31 | 0.31 | 0.29 | 0.19 | 0.13 | 0.11 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| SCHOOL BUSES - GAS (SBG) | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 |
| SCHOOL BUSES - DIESEL (SBD) | 2.18 | 1.83 | 1.58 | 1.34 | 1.08 | 0.83 | 0.69 |
| OTHER BUSES - GAS (OBG) | 0.25 | 0.14 | 0.11 | 0.09 | 0.08 | 0.07 | 0.07 |
| OTHER BUSES - MOTOR COACH - DIESEL | 0.91 | 0.31 | 0.21 | 0.20 | 0.19 | 0.17 | 0.16 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.99 | 0.35 | 0.35 | 0.37 | 0.39 | 0.39 | 0.39 |
| MOTOR HOMES (MH) | 0.76 | 0.54 | 0.48 | 0.44 | 0.41 | 0.38 | 0.37 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 169.93 | 83.88 | 64.53 | 56.51 | 51.46 | 48.61 | 47.74 |
| AIRCRAFT* | 16.58 | 17.56 | 20.44 | 23.30 | 25.62 | 26.81 | 27.61 |
| TRAINS | 14.78 | 16.13 | 16.69 | 17.54 | 17.75 | 16.94 | 15.51 |
| OCEAN GOING VESSELS* | 10.94 | 9.80 | 9.64 | 9.94 | 10.36 | 10.82 | 9.98 |
| COMMERCIAL HARBOR CRAFT* | 3.45 | 3.32 | 3.33 | 3.29 | 3.23 | 3.15 | 3.10 |
| RECREATIONAL BOATS | 3.91 | 3.64 | 3.54 | 3.46 | 3.41 | 3.37 | 3.35 |
| OFF-ROAD RECREATIONAL VEHICLES | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| OFF-ROAD EQUIPMENT | 64.72 | 37.41 | 31.70 | 26.87 | 23.72 | 21.03 | 19.83 |
| OFF-ROAD EQUIPMENT (PERP) | 9.57 | 5.16 | 4.16 | 3.58 | 3.48 | 3.40 | 3.43 |
| FARM EQUIPMENT | 2.62 | 0.61 | 0.52 | 0.44 | 0.37 | 0.32 | 0.28 |
| FUEL STORAGE AND HANDLING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL OTHER MOBILE SOURCES** | 126.60 | 93.67 | 90.05 | 88.45 | 87.98 | 85.88 | 83.12 |
| **TOTAL MOBILE** | 296.52 | 177.55 | 154.58 | 144.97 | 139.44 | 134.49 | 130.86 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **Grand Total** | 348.30 | 225.10 | 199.73 | 188.15 | 181.58 | 175.93 | 172.19 |

## Coachella Valley ROG Emissions

Source: CEPAM2022 v1.01 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| COGENERATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MANUFACTURING AND INDUSTRIAL | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| FOOD AND AGRICULTURAL PROCESSING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SERVICE AND COMMERCIAL | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 |
| OTHER (FUEL COMBUSTION) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL FUEL COMBUSTION** | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| SEWAGE TREATMENT | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| LANDFILLS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| INCINERATORS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SOIL REMEDIATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (WASTE DISPOSAL) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL WASTE DISPOSAL** | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| LAUNDERING | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| DEGREASING | 0.25 | 0.30 | 0.31 | 0.32 | 0.32 | 0.32 | 0.33 |
| COATINGS AND RELATED PROCESS SOLVENTS | 1.19 | 1.47 | 1.56 | 1.61 | 1.64 | 1.68 | 1.71 |
| PRINTING | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 |
| ADHESIVES AND SEALANTS | 0.13 | 0.14 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| OTHER (CLEANING AND SURFACE COATINGS) | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 1.62 | 1.97 | 2.08 | 2.15 | 2.18 | 2.23 | 2.26 |
| OIL AND GAS PRODUCTION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PETROLEUM MARKETING | 0.37 | 0.33 | 0.32 | 0.31 | 0.32 | 0.32 | 0.33 |
| OTHER (PETROLEUM PRODUCTION AND | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL PETROLEUM PRODUCTION AND** | 0.37 | 0.33 | 0.32 | 0.31 | 0.32 | 0.32 | 0.33 |
| CHEMICAL | 0.11 | 0.14 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| FOOD AND AGRICULTURE | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 |
| MINERAL PROCESSES | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| METAL PROCESSES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| WOOD AND PAPER | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ELECTRONICS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (INDUSTRIAL PROCESSES) | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 |
| **TOTAL INDUSTRIAL PROCESSES** | 0.23 | 0.27 | 0.28 | 0.29 | 0.30 | 0.30 | 0.31 |
| **TOTAL STATIONARY** | 2.34 | 2.68 | 2.80 | 2.87 | 2.91 | 2.97 | 3.01 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 2.96 | 3.26 | 3.46 | 3.64 | 3.86 | 4.06 | 4.19 |
| ARCHITECTURAL COATINGS AND RELATED | 0.29 | 0.34 | 0.36 | 0.38 | 0.40 | 0.43 | 0.44 |
| PESTICIDES/FERTILIZERS | 0.25 | 0.22 | 0.22 | 0.22 | 0.22 | 0.23 | 0.23 |
| ASPHALT PAVING / ROOFING | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| **TOTAL SOLVENT EVAPORATION** | 3.57 | 3.90 | 4.12 | 4.32 | 4.56 | 4.79 | 4.94 |
| RESIDENTIAL FUEL COMBUSTION | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| FARMING OPERATIONS | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MANAGED BURNING AND DISPOSAL | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| COOKING | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.22 | 0.22 |
| **TOTAL AREAWIDE** | 3.78 | 4.11 | 4.33 | 4.53 | 4.78 | 5.01 | 5.16 |

## Mobile Sources

| **SUMMARY CATEGORY NAME** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 1.20 | 0.81 | 0.70 | 0.63 | 0.57 | 0.50 | 0.47 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 0.39 | 0.26 | 0.21 | 0.18 | 0.14 | 0.12 | 0.11 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 0.62 | 0.50 | 0.46 | 0.43 | 0.39 | 0.34 | 0.32 |
| MEDIUM DUTY TRUCKS (MDV) | 0.60 | 0.46 | 0.40 | 0.36 | 0.33 | 0.29 | 0.28 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 0.10 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDDT1) | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDDT2) | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDDT) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 0.26 | 0.12 | 0.13 | 0.14 | 0.15 | 0.16 | 0.16 |
| MOTORCYCLES (MCY) | 0.35 | 0.41 | 0.42 | 0.44 | 0.46 | 0.46 | 0.47 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - GAS (SBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - DIESEL (SBD) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER BUSES - GAS (OBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER BUSES - MOTOR COACH - DIESEL (OBC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MOTOR HOMES (MH) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 3.64 | 2.65 | 2.41 | 2.26 | 2.11 | 1.92 | 1.88 |
| AIRCRAFT | 0.10 | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 |
| TRAINS | 0.16 | 0.18 | 0.18 | 0.18 | 0.18 | 0.17 | 0.14 |
| RECREATIONAL BOATS | 0.81 | 0.62 | 0.55 | 0.48 | 0.43 | 0.39 | 0.36 |
| OFF-ROAD RECREATIONAL VEHICLES | 0.14 | 0.12 | 0.11 | 0.09 | 0.08 | 0.07 | 0.06 |
| OFF-ROAD EQUIPMENT | 2.11 | 1.80 | 1.51 | 1.17 | 0.95 | 0.79 | 0.71 |
| OFF-ROAD EQUIPMENT (PERP) | 0.05 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| FARM EQUIPMENT | 0.09 | 0.09 | 0.07 | 0.06 | 0.05 | 0.05 | 0.04 |
| FUEL STORAGE AND HANDLING | 0.26 | 0.23 | 0.22 | 0.22 | 0.22 | 0.22 | 0.23 |
| **TOTAL OTHER MOBILE SOURCES** | 3.73 | 3.14 | 2.75 | 2.32 | 2.01 | 1.79 | 1.66 |
| **TOTAL MOBILE** | 7.37 | 5.79 | 5.15 | 4.58 | 4.13 | 3.71 | 3.54 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **GRAND TOTAL** | 13.48 | 12.58 | 12.28 | 11.97 | 11.81 | 11.68 | 11.70 |

## Coachella Valley NOx Emissions

Source: CEPAM2022 v1.01 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 0.63 | 0.84 | 0.80 | 0.71 | 0.67 | 0.68 | 0.68 |
| COGENERATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MANUFACTURING AND INDUSTRIAL | 0.11 | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 |
| FOOD AND AGRICULTURAL PROCESSING | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SERVICE AND COMMERCIAL | 0.22 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| OTHER (FUEL COMBUSTION) | 0.09 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| **TOTAL FUEL COMBUSTION** | 1.05 | 1.26 | 1.24 | 1.14 | 1.10 | 1.11 | 1.11 |
| SEWAGE TREATMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LANDFILLS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| INCINERATORS | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| SOIL REMEDIATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (WASTE DISPOSAL) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL WASTE DISPOSAL** | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| LAUNDERING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DEGREASING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COATINGS AND RELATED PROCESS SOLVENTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PRINTING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ADHESIVES AND SEALANTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (CLEANING AND SURFACE COATINGS) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OIL AND GAS PRODUCTION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PETROLEUM MARKETING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (PETROLEUM PRODUCTION AND | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL PETROLEUM PRODUCTION AND** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHEMICAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FOOD AND AGRICULTURE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MINERAL PROCESSES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| METAL PROCESSES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| WOOD AND PAPER | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ELECTRONICS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (INDUSTRIAL PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL INDUSTRIAL PROCESSES** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL STATIONARY** | 1.06 | 1.27 | 1.24 | 1.15 | 1.11 | 1.12 | 1.12 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ARCHITECTURAL COATINGS AND RELATED | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PESTICIDES/FERTILIZERS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ASPHALT PAVING / ROOFING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL SOLVENT EVAPORATION** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESIDENTIAL FUEL COMBUSTION | 0.29 | 0.31 | 0.29 | 0.28 | 0.27 | 0.27 | 0.27 |
| FARMING OPERATIONS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MANAGED BURNING AND DISPOSAL | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| COOKING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 0.29 | 0.31 | 0.30 | 0.29 | 0.28 | 0.28 | 0.28 |
| **TOTAL AREAWIDE** | 0.29 | 0.31 | 0.30 | 0.29 | 0.28 | 0.28 | 0.28 |

## Mobile Sources

| **SUMMARY CATEGORY NAME** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 0.65 | 0.37 | 0.30 | 0.27 | 0.25 | 0.23 | 0.23 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 0.24 | 0.13 | 0.09 | 0.07 | 0.06 | 0.05 | 0.04 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 0.56 | 0.30 | 0.23 | 0.19 | 0.16 | 0.14 | 0.13 |
| MEDIUM DUTY TRUCKS (MDV) | 0.56 | 0.28 | 0.19 | 0.15 | 0.12 | 0.10 | 0.10 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 0.08 | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 0.06 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDDT1) | 0.38 | 0.17 | 0.12 | 0.08 | 0.06 | 0.04 | 0.03 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDDT2) | 0.15 | 0.07 | 0.05 | 0.04 | 0.03 | 0.02 | 0.02 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDDT) | 1.00 | 0.37 | 0.32 | 0.30 | 0.29 | 0.29 | 0.29 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 6.47 | 3.92 | 3.11 | 3.06 | 3.10 | 3.23 | 3.35 |
| MOTORCYCLES (MCY) | 0.08 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 0.04 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - GAS (SBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - DIESEL (SBD) | 0.08 | 0.08 | 0.07 | 0.06 | 0.04 | 0.03 | 0.02 |
| OTHER BUSES - GAS (OBG) | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER BUSES - MOTOR COACH - DIESEL (OBC) | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| MOTOR HOMES (MH) | 0.03 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 10.43 | 5.90 | 4.69 | 4.40 | 4.29 | 4.30 | 4.39 |
| AIRCRAFT | 0.39 | 0.40 | 0.45 | 0.51 | 0.56 | 0.59 | 0.61 |
| TRAINS | 3.47 | 4.07 | 4.19 | 4.41 | 4.47 | 4.23 | 3.71 |
| RECREATIONAL BOATS | 0.11 | 0.10 | 0.10 | 0.09 | 0.09 | 0.09 | 0.09 |
| OFF-ROAD RECREATIONAL VEHICLES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OFF-ROAD EQUIPMENT | 2.74 | 0.67 | 0.63 | 0.59 | 0.57 | 0.56 | 0.56 |
| OFF-ROAD EQUIPMENT (PERP) | 0.54 | 0.29 | 0.24 | 0.20 | 0.20 | 0.19 | 0.19 |
| FARM EQUIPMENT | 0.38 | 0.34 | 0.29 | 0.24 | 0.21 | 0.18 | 0.16 |
| FUEL STORAGE AND HANDLING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL OTHER MOBILE SOURCES** | 7.64 | 5.88 | 5.90 | 6.05 | 6.09 | 5.84 | 5.33 |
| **TOTAL MOBILE** | 18.07 | 11.78 | 10.59 | 10.46 | 10.38 | 10.14 | 9.72 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **Grand Total** | 19.42 | 13.37 | 12.13 | 11.89 | 11.78 | 11.53 | 11.12 |

## San Joaquin Valley ROG Emissions

Source: CEPAM2019 v1.04 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 0.19 | 0.15 | 0.15 | 0.13 | 0.12 | 0.11 | 0.10 |
| COGENERATION | 0.43 | 0.41 | 0.41 | 0.42 | 0.43 | 0.47 | 0.49 |
| OIL AND GAS PRODUCTION (COMBUSTION) | 1.15 | 0.96 | 0.88 | 0.81 | 0.74 | 0.68 | 0.64 |
| PETROLEUM REFINING (COMBUSTION) | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| MANUFACTURING AND INDUSTRIAL | 0.23 | 0.24 | 0.19 | 0.19 | 0.19 | 0.20 | 0.20 |
| FOOD AND AGRICULTURAL PROCESSING | 0.82 | 0.69 | 0.65 | 0.63 | 0.62 | 0.62 | 0.63 |
| SERVICE AND COMMERCIAL | 0.54 | 0.56 | 0.55 | 0.54 | 0.55 | 0.55 | 0.55 |
| OTHER (FUEL COMBUSTION) | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| **TOTAL FUEL COMBUSTION** | 3.43 | 3.08 | 2.91 | 2.79 | 2.72 | 2.69 | 2.69 |
| SEWAGE TREATMENT | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 |
| LANDFILLS | 1.51 | 1.58 | 1.61 | 1.66 | 1.71 | 1.75 | 1.78 |
| INCINERATORS | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| SOIL REMEDIATION | 0.09 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| OTHER (WASTE DISPOSAL) | 21.54 | 22.05 | 23.02 | 23.82 | 24.92 | 26.09 | 26.92 |
| **TOTAL WASTE DISPOSAL** | 23.19 | 23.79 | 24.79 | 25.64 | 26.80 | 28.01 | 28.87 |
| LAUNDERING | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 |
| DEGREASING | 1.79 | 1.84 | 1.95 | 2.02 | 2.11 | 2.23 | 2.32 |
| COATINGS AND RELATED PROCESS SOLVENTS | 8.84 | 9.70 | 10.14 | 10.37 | 10.79 | 11.40 | 11.94 |
| PRINTING | 5.61 | 5.25 | 5.34 | 5.36 | 5.43 | 5.55 | 5.66 |
| ADHESIVES AND SEALANTS | 0.62 | 0.63 | 0.63 | 0.63 | 0.63 | 0.64 | 0.64 |
| OTHER (CLEANING AND SURFACE COATINGS) | 7.03 | 7.71 | 8.05 | 8.08 | 8.21 | 8.50 | 8.79 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 23.98 | 25.22 | 26.20 | 26.55 | 27.27 | 28.40 | 29.45 |
| OIL AND GAS PRODUCTION | 11.46 | 9.60 | 8.75 | 8.01 | 7.33 | 6.71 | 6.33 |
| PETROLEUM REFINING | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 |
| PETROLEUM MARKETING | 5.09 | 4.31 | 4.05 | 3.88 | 3.80 | 3.77 | 3.78 |
| OTHER (PETROLEUM PRODUCTION AND | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL PETROLEUM PRODUCTION AND** | 17.00 | 14.36 | 13.24 | 12.34 | 11.58 | 10.93 | 10.56 |
| CHEMICAL | 2.63 | 2.52 | 2.63 | 2.70 | 2.82 | 2.97 | 3.08 |
| FOOD AND AGRICULTURE | 12.76 | 13.08 | 13.92 | 14.59 | 15.47 | 16.43 | 17.11 |
| MINERAL PROCESSES | 0.22 | 0.21 | 0.21 | 0.20 | 0.21 | 0.21 | 0.21 |
| METAL PROCESSES | 0.17 | 0.20 | 0.20 | 0.21 | 0.21 | 0.23 | 0.24 |
| WOOD AND PAPER | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| GLASS AND RELATED PRODUCTS | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| ELECTRONICS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (INDUSTRIAL PROCESSES) | 0.49 | 0.50 | 0.52 | 0.54 | 0.57 | 0.60 | 0.62 |
| **TOTAL INDUSTRIAL PROCESSES** | 16.28 | 16.51 | 17.50 | 18.26 | 19.30 | 20.45 | 21.29 |
| **TOTAL STATIONARY** | 83.88 | 82.96 | 84.65 | 85.57 | 87.65 | 90.49 | 92.85 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 25.78 | 27.45 | 28.66 | 29.85 | 31.36 | 32.69 | 33.61 |
| ARCHITECTURAL COATINGS AND RELATED | 6.74 | 7.07 | 7.28 | 7.53 | 7.75 | 7.95 | 8.07 |
| PESTICIDES/FERTILIZERS | 17.02 | 15.78 | 15.63 | 15.50 | 15.38 | 15.27 | 15.20 |
| ASPHALT PAVING / ROOFING | 1.04 | 1.20 | 1.25 | 1.29 | 1.32 | 1.36 | 1.39 |
| **TOTAL SOLVENT EVAPORATION** | 50.58 | 51.50 | 52.82 | 54.17 | 55.82 | 57.27 | 58.27 |
| RESIDENTIAL FUEL COMBUSTION | 0.42 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 |
| FARMING OPERATIONS | 93.76 | 93.53 | 93.45 | 93.40 | 93.36 | 93.33 | 93.31 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.13 | 0.14 | 0.14 | 0.15 | 0.15 | 0.16 | 0.16 |
| MANAGED BURNING AND DISPOSAL | 9.29 | 10.48 | 6.36 | 6.36 | 6.35 | 6.35 | 6.34 |
| COOKING | 0.61 | 0.63 | 0.65 | 0.67 | 0.69 | 0.71 | 0.72 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 104.20 | 105.19 | 101.02 | 100.98 | 100.96 | 100.95 | 100.94 |
| **TOTAL AREAWIDE** | 154.78 | 156.69 | 153.84 | 155.15 | 156.78 | 158.22 | 159.21 |

## Mobile Sources

| **SUMMARY CATEGORY NAME** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 9.46 | 5.99 | 5.33 | 4.91 | 4.54 | 4.24 | 4.05 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 3.09 | 1.78 | 1.42 | 1.15 | 0.90 | 0.74 | 0.66 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 5.44 | 3.80 | 3.39 | 3.06 | 2.73 | 2.39 | 2.22 |
| MEDIUM DUTY TRUCKS (MDV) | 6.11 | 4.23 | 3.58 | 3.09 | 2.67 | 2.33 | 2.15 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 1.53 | 0.97 | 0.82 | 0.75 | 0.63 | 0.39 | 0.35 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.18 | 0.13 | 0.11 | 0.09 | 0.07 | 0.05 | 0.05 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 0.22 | 0.09 | 0.07 | 0.06 | 0.05 | 0.05 | 0.05 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 | 0.42 | 0.31 | 0.26 | 0.22 | 0.20 | 0.18 | 0.17 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 | 0.12 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.07 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS | 1.14 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 2.90 | 0.75 | 0.80 | 0.83 | 0.85 | 0.88 | 0.90 |
| MOTORCYCLES (MCY) | 3.13 | 2.93 | 2.85 | 2.80 | 2.77 | 2.81 | 2.85 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCHOOL BUSES - GAS (SBG) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| SCHOOL BUSES - DIESEL (SBD) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| OTHER BUSES - GAS (OBG) | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| OTHER BUSES - MOTOR COACH - DIESEL | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MOTOR HOMES (MH) | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 33.92 | 21.17 | 18.79 | 17.12 | 15.57 | 14.20 | 13.58 |
| AIRCRAFT | 3.01 | 3.90 | 3.91 | 3.91 | 3.92 | 3.92 | 3.93 |
| TRAINS | 0.61 | 0.66 | 0.65 | 0.67 | 0.65 | 0.62 | 0.55 |
| OCEAN GOING VESSELS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COMMERCIAL HARBOR CRAFT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RECREATIONAL BOATS | 20.37 | 15.52 | 13.65 | 12.11 | 10.81 | 9.70 | 8.94 |
| OFF-ROAD RECREATIONAL VEHICLES | 2.35 | 1.94 | 1.80 | 1.50 | 1.25 | 1.08 | 0.98 |
| OFF-ROAD EQUIPMENT | 14.95 | 14.02 | 11.70 | 9.09 | 7.36 | 6.20 | 5.60 |
| OFF-ROAD EQUIPMENT (PERP) | 0.49 | 0.33 | 0.30 | 0.30 | 0.31 | 0.32 | 0.33 |
| FARM EQUIPMENT | 9.03 | 6.64 | 5.60 | 4.74 | 4.06 | 3.51 | 3.20 |
| FUEL STORAGE AND HANDLING | 2.29 | 1.98 | 1.90 | 1.86 | 1.85 | 1.89 | 1.94 |
| **TOTAL OTHER MOBILE SOURCES** | 53.10 | 44.99 | 39.51 | 34.17 | 30.21 | 27.23 | 25.46 |
| **TOTAL MOBILE** | 87.02 | 66.16 | 58.30 | 51.30 | 45.78 | 41.43 | 39.04 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **Grand Total** | 325.68 | 305.81 | 296.78 | 292.02 | 290.21 | 290.13 | 291.11 |

## San Joaquin Valley NOx Emissions

Source: CEPAM2019 v1.04 ("revised" 2026)

### Stationary Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| ELECTRIC UTILITIES | 2.84 | 2.44 | 2.48 | 2.45 | 2.24 | 2.17 | 2.16 |
| COGENERATION | 0.74 | 0.71 | 0.72 | 0.72 | 0.75 | 0.80 | 0.85 |
| OIL AND GAS PRODUCTION (COMBUSTION) | 2.75 | 2.12 | 1.75 | 1.52 | 1.34 | 1.22 | 1.15 |
| PETROLEUM REFINING (COMBUSTION) | 0.24 | 0.21 | 0.18 | 0.17 | 0.16 | 0.16 | 0.16 |
| MANUFACTURING AND INDUSTRIAL | 1.59 | 1.60 | 1.48 | 1.47 | 1.47 | 1.51 | 1.54 |
| FOOD AND AGRICULTURAL PROCESSING | 7.12 | 5.45 | 4.71 | 4.07 | 3.66 | 3.49 | 3.42 |
| SERVICE AND COMMERCIAL | 4.26 | 4.31 | 3.80 | 3.71 | 3.64 | 3.59 | 3.59 |
| OTHER (FUEL COMBUSTION) | 0.68 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| **TOTAL FUEL COMBUSTION** | 20.20 | 17.41 | 15.68 | 14.66 | 13.81 | 13.50 | 13.43 |
| SEWAGE TREATMENT | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| LANDFILLS | 0.23 | 0.24 | 0.15 | 0.16 | 0.16 | 0.17 | 0.17 |
| INCINERATORS | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| SOIL REMEDIATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (WASTE DISPOSAL) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL WASTE DISPOSAL** | 0.32 | 0.34 | 0.23 | 0.24 | 0.25 | 0.25 | 0.26 |
| LAUNDERING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DEGREASING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COATINGS AND RELATED PROCESS SOLVENTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PRINTING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ADHESIVES AND SEALANTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (CLEANING AND SURFACE COATINGS) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL CLEANING AND SURFACE COATINGS** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OIL AND GAS PRODUCTION | 0.23 | 0.19 | 0.10 | 0.09 | 0.09 | 0.08 | 0.07 |
| PETROLEUM REFINING | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| PETROLEUM MARKETING | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| OTHER (PETROLEUM PRODUCTION AND | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL PETROLEUM PRODUCTION AND** | 0.30 | 0.26 | 0.17 | 0.15 | 0.14 | 0.14 | 0.13 |
| CHEMICAL | 0.32 | 0.31 | 0.32 | 0.33 | 0.35 | 0.36 | 0.38 |
| FOOD AND AGRICULTURE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MINERAL PROCESSES | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.25 |
| METAL PROCESSES | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| WOOD AND PAPER | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| GLASS AND RELATED PRODUCTS | 3.08 | 3.37 | 2.79 | 2.79 | 1.75 | 1.75 | 1.75 |
| ELECTRONICS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (INDUSTRIAL PROCESSES) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| **TOTAL INDUSTRIAL PROCESSES** | 3.66 | 3.93 | 3.36 | 3.36 | 2.34 | 2.36 | 2.38 |
| **TOTAL STATIONARY** | 24.49 | 21.93 | 19.43 | 18.42 | 16.54 | 16.25 | 16.20 |

### Areawide Sources

| SUMMARY CATEGORY NAME | 2017 | 2023 | 2026 | 2029 | 2032 | 2035 | 2037 |
|---|---|---|---|---|---|---|---|
| CONSUMER PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ARCHITECTURAL COATINGS AND RELATED | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PESTICIDES/FERTILIZERS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ASPHALT PAVING / ROOFING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL SOLVENT EVAPORATION** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| RESIDENTIAL FUEL COMBUSTION | 3.15 | 2.85 | 2.73 | 2.64 | 2.53 | 2.41 | 2.36 |
| FARMING OPERATIONS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CONSTRUCTION AND DEMOLITION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNPAVED ROAD DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FUGITIVE WINDBLOWN DUST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FIRES | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| MANAGED BURNING AND DISPOSAL | 4.52 | 4.45 | 1.25 | 1.24 | 1.24 | 1.23 | 1.23 |
| COOKING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTHER (MISCELLANEOUS PROCESSES) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL MISCELLANEOUS PROCESSES** | 7.70 | 7.33 | 4.01 | 3.92 | 3.80 | 3.68 | 3.62 |
| **TOTAL AREAWIDE** | 7.70 | 7.33 | 4.01 | 3.92 | 3.80 | 3.68 | 3.62 |

## Mobile Sources

| **SUMMARY CATEGORY NAME** | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
|---|---|---|---|---|---|---|---|
| LIGHT DUTY PASSENGER (LDA) | 6.07 | 3.13 | 2.61 | 2.37 | 2.27 | 2.25 | 2.27 |
| LIGHT DUTY TRUCKS - 1 (LDT1) | 1.69 | 0.75 | 0.54 | 0.41 | 0.32 | 0.28 | 0.27 |
| LIGHT DUTY TRUCKS - 2 (LDT2) | 4.61 | 2.14 | 1.58 | 1.25 | 1.04 | 0.91 | 0.86 |
| MEDIUM DUTY TRUCKS (MDV) | 5.40 | 2.40 | 1.61 | 1.16 | 0.90 | 0.75 | 0.69 |
| LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1) | 1.15 | 0.67 | 0.52 | 0.41 | 0.33 | 0.28 | 0.25 |
| LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2) | 0.17 | 0.11 | 0.09 | 0.07 | 0.06 | 0.05 | 0.04 |
| MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT) | 0.29 | 0.11 | 0.08 | 0.06 | 0.05 | 0.05 | 0.05 |
| HEAVY HEAVY DUTY GAS TRUCKS (HHDGT) | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 1 | 7.31 | 4.03 | 2.86 | 1.98 | 1.34 | 0.91 | 0.69 |
| LIGHT HEAVY DUTY DIESEL TRUCKS - 2 | 1.90 | 1.09 | 0.80 | 0.59 | 0.44 | 0.34 | 0.29 |
| MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDDT) | 12.90 | 4.57 | 4.01 | 3.66 | 3.45 | 3.26 | 3.16 |
| HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT) | 56.12 | 30.56 | 24.05 | 22.63 | 22.29 | 22.29 | 22.59 |
| MOTORCYCLES (MCY) | 0.70 | 0.63 | 0.62 | 0.61 | 0.61 | 0.62 | 0.63 |
| HEAVY DUTY DIESEL URBAN BUSES (UBD) | 0.22 | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 |
| HEAVY DUTY GAS URBAN BUSES (UBG) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| SCHOOL BUSES - GAS (SBG) | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| SCHOOL BUSES - DIESEL (SBD) | 1.26 | 1.02 | 0.87 | 0.73 | 0.56 | 0.40 | 0.32 |
| OTHER BUSES - GAS (OBG) | 0.08 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| OTHER BUSES - MOTOR COACH - DIESEL (OBC) | 0.19 | 0.06 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 |
| ALL OTHER BUSES - DIESEL (OBD) | 0.23 | 0.08 | 0.09 | 0.09 | 0.10 | 0.10 | 0.10 |
| MOTOR HOMES (MH) | 0.26 | 0.17 | 0.15 | 0.13 | 0.11 | 0.10 | 0.09 |
| **TOTAL ON-ROAD MOTOR VEHICLES** | 100.61 | 51.64 | 40.59 | 36.24 | 33.95 | 32.66 | 32.37 |
| AIRCRAFT | 2.53 | 4.61 | 4.60 | 4.59 | 4.59 | 4.59 | 4.59 |
| TRAINS | 13.12 | 15.23 | 15.69 | 16.38 | 16.48 | 15.73 | 14.03 |
| OCEAN GOING VESSELS | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 | 0.04 |
| COMMERCIAL HARBOR CRAFT | 0.07 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| RECREATIONAL BOATS | 3.42 | 3.18 | 3.09 | 3.02 | 2.97 | 2.93 | 2.91 |
| OFF-ROAD RECREATIONAL VEHICLES | 0.08 | 0.09 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 |
| OFF-ROAD EQUIPMENT | 24.01 | 17.57 | 14.52 | 12.24 | 10.74 | 9.79 | 9.40 |
| OFF-ROAD EQUIPMENT (PERP) | 5.87 | 3.16 | 2.55 | 2.20 | 2.13 | 2.09 | 2.10 |
| FARM EQUIPMENT | 50.45 | 33.61 | 27.35 | 22.38 | 18.40 | 15.20 | 13.40 |
| FUEL STORAGE AND HANDLING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **TOTAL OTHER MOBILE SOURCES** | 99.59 | 77.53 | 67.97 | 60.98 | 55.51 | 50.52 | 46.60 |
| **TOTAL MOBILE** | 200.20 | 129.17 | 108.56 | 97.22 | 89.45 | 83.17 | 78.97 |
| | **2017** | **2023** | **2026** | **2029** | **2032** | **2035** | **2037** |
| **Grand Total** | 232.39 | 158.43 | 132.00 | 119.56 | 109.80 | 103.10 | 98.80 |