

Chapter 1

OVERVIEW



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Chapter 1: Overview

1.1 INTRODUCTION

Over the years, the San Joaquin Valley Air Pollution Control District (District) and the California Air Resources Board (CARB) have adopted numerous attainment plans (State Implementation Plans, or SIPs), which serve as the primary vehicles for improving air quality in the San Joaquin Valley (Valley). These SIPs use extensive science and research, state of the art air quality modeling, and the best available information to develop a strategy to bring the Valley into attainment with federal health-based air quality standards. Each SIP builds upon the work of prior plans, while establishing the path for continued air quality improvements. Following the adoption of each attainment plan, the District implements plan strategies through regulatory development, outreach, continued research, and incentive programs. Each attainment plan is just one milestone in the District's continued effort to improve air quality in the Valley.

Under previous District attainment plans, the District has implemented generations of emissions control measures for stationary and area sources under its jurisdiction. Similarly, CARB has adopted stringent regulations for mobile sources. Together, these efforts represent the nation's toughest air pollution emissions controls. In addition to the stringent regulatory program, the District also operates amongst the most effective and efficient incentive grants program, investing over \$5.7 billion in public/private funding towards clean air projects to date that have achieved over 250,000 tons of emissions reductions. Due to significant investments from the District to implement strategies from past attainment plans, the Valley's ozone and fine particulate matter (PM_{2.5}) precursor emissions are at historically low levels, and air quality has improved significantly, providing Valley residents with associated health benefits. The Valley has already attained the 1987 PM₁₀ standard and the 1979 1-hour ozone standard. Additionally, on January 28, 2022, EPA determined that the Valley attained the 1997 24-hour PM_{2.5} standard of 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) by the attainment date of December 31, 2020.¹

Despite the progress made to improve the Valley's air quality through implementation of multiple attainment plans adopted by the District and clean air investments by Valley businesses and residents, substantial additional emissions reductions are needed, particularly from mobile sources under CARB and U.S. Environmental Protection Agency (EPA) jurisdiction that make up over 80% of remaining Valley NO_x emissions.

¹ EPA. *Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Determination of Attainment by the Attainment Date; California; San Joaquin Valley Serious Area and Section 189(d) Plan for Attainment of the 1997 24-hour PM_{2.5} NAAQS; Final Rule*. 87 Fed. Reg. 19, pp. 4503-4508. (January 28, 2022). Retrieved from: <https://www.federalregister.gov/documents/2022/01/28/2022-01728/partial-approval-and-partial-disapproval-of-air-quality-implementation-plans-and-determination-of>

1.2 NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PARTICULATE MATTER

The federal Clean Air Act (CAA) Section (§§) 108 and 109 require EPA to establish health-based ambient air quality standards (national ambient air quality standards, or NAAQS) for six criteria pollutants, including PM_{2.5}. EPA designates an area as attainment or nonattainment based on the most recent three years of air quality data available. Under the CAA Subpart 4,² PM_{2.5} nonattainment areas are initially classified as “Moderate,” with six years from the initial nonattainment designation date to reach attainment (though two one-year extensions are available in certain circumstances). Areas may request reclassification to “Serious,” with ten years from the initial attainment designation date to reach attainment. In addition to the attainment deadline, a nonattainment area’s classification sets specific planning requirements under the CAA. The guidelines for demonstrating compliance with these requirements are provided in EPA’s 2016 Implementation Rule.³

1.2.1 2012 Annual PM_{2.5} Standard

On January 15, 2013, EPA revised the annual average PM_{2.5} standard to 12 µg/m³ (2012 PM_{2.5} standard), while retaining the 24-hour standard of 35 µg/m³ as established in 2006.⁴ In 2015, EPA designated the Valley as Moderate nonattainment for the 2012 PM_{2.5} standard, with an attainment deadline of December 31, 2021.⁵ Due to the impracticability of achieving the standard by the Moderate area attainment date, the District adopted the *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard (2016 Moderate Plan)*, including an attainment impracticability demonstration and a request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment. Effective on December 27, 2021, EPA finalized partial approval of the District’s *2016 Moderate Plan*, as updated by the District’s *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards (2018 PM_{2.5} Plan)*, and reclassified the District as a Serious nonattainment area for the 2012 PM_{2.5} NAAQS, with an attainment deadline of December 31, 2025.⁶

Prior to EPA approving the *2016 Moderate Plan*, the District addressed the Serious Plan requirements for the 2012 annual standard, along with other PM_{2.5} standards, as part of the integrated *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards (2018*

² Federal Clean Air Act §§188, 189, and 190

³ EPA. *Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements; Final Rule*. 81 Fed. Reg. 164, pp. 58010-58162. (2016, August 24). (to be codified at 40 CFR Parts 50, 51, and 93). <https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf>

⁴ EPA. *National Ambient Air Quality Standards for Particulate Matter; Final Rule*. 78 Fed. Reg. 10, pp. 3086-3287 (January 15, 2013). (to be codified at 40 CFR Parts 50, 51, 52 et al.). Retrieved from: <http://www.gpo.gov/fdsys/pkg/FR-2013-01-15/pdf/2012-30946.pdf>

⁵ EPA. *Air Quality Designations for the 2012 Primary Annual Fine Particle (PM_{2.5}) NAAQS; Final Rule*. 80 Fed. Reg. 10, pp. 2206-2284. (January 15, 2015). Retrieved from: <http://www.gpo.gov/fdsys/pkg/FR-2015-01-15/pdf/2015-00021.pdf>

⁶ EPA. *Clean Air Plans; California; San Joaquin Valley Moderate Area Plan and Reclassification as Serious Nonattainment for the 2012 PM_{2.5} NAAQS; Contingency Measures for the 2006 PM_{2.5} NAAQS; Final Rule*. 86 Fed. Reg. 225, pp. 67343-67350. (November 26, 2021). Retrieved from: <https://www.govinfo.gov/content/pkg/FR-2021-11-26/pdf/2021-25616.pdf>

PM2.5 Plan), years earlier than required in order to achieve early emissions reductions. In December 2021, EPA proposed approval of the Serious Plan for the 2012 PM2.5 standard,⁷ then reversed the decision and proposed disapproval in October 2022.⁸ In response to EPA's reversal, CARB withdrew the Plan for the 2012 standard with District concurrence.

As a result of EPA's reclassification of the San Joaquin Valley as a Serious nonattainment area for the 2012 PM2.5 NAAQS, in addition to CARB withdrawing the portions of the *2018 PM2.5 Plan* for the 2012 PM2.5 NAAQS, California is required to submit, within 18 months after the effective date of the reclassification, an emissions inventory, provisions to assure that best available control measures (BACM) shall be implemented no later than four years after the date of reclassification, and any Nonattainment New Source Review (NNSR) SIP revisions required to satisfy the requirements of CAA §§ 189(b)(3) and 189(e).

Pursuant to the Serious area plan requirements, this document contains the District and CARB's precursor demonstration, the demonstration that BACM for the control of direct PM2.5 and PM2.5 precursors are implemented no later than four years after reclassification of the area, and a comprehensive, accurate, and current inventory of actual emissions from all sources of PM2.5 and PM2.5 precursors. Additionally, the District recently adopted revisions to District Rule 2201 (New and Modified Stationary Source Review Rule) in April 2023, which fulfills the requirements for Serious PM2.5 nonattainment areas.

California is also required to submit, within 24 months after the effective date of reclassification, a Serious area plan that satisfies the requirements of part D of title I of the CAA, including a demonstration that the Valley will attain the 2012 PM2.5 standard as expeditiously as practicable in accordance with the requirements of CAA §§ 189(b) and 188(e). Additional Serious area plan requirements include provisions for reasonable further progress (RFP), quantitative milestones, provisions to assure that control requirements applicable to major stationary sources of PM2.5 also apply to major stationary sources of PM2.5 precursors, and contingency measures to be implemented if the area fails to meet RFP or to attain by the applicable attainment date.

1.3 PUBLIC PROCESS

To ensure that the public has had the opportunity for meaningful participation in the development of the upcoming planning efforts, the District provided multiple opportunities for the public to learn more about air quality and to provide the District with comments to help guide Plan development. The District hosted an initial workshop to begin the public process for Plan development on March 23, 2023. At this meeting, the

⁷ EPA. *Clean Air Plans; 2012 Fine Particulate Matter Serious Nonattainment Area Requirements; San Joaquin Valley, California; Proposed Rule*. 86 Fed. Reg. 247, pp. 74310-74352. (December 29, 2021). Retrieved from: <https://www.govinfo.gov/content/pkg/FR-2021-12-29/pdf/2021-27796.pdf>

⁸ EPA. *Clean Air Plans; 2012 Fine Particulate Matter Serious Nonattainment Area Requirements; San Joaquin Valley, California; Proposed Rule*. 87 Fed. Reg. 192, pp. 60494-60531. (October 5, 2022). Retrieved from: <https://www.govinfo.gov/content/pkg/FR-2022-10-05/pdf/2022-21492.pdf>

District invited the public to provide input at multiple checkpoints throughout the presentation to encourage discussion, interaction, and engagement, specifically seeking suggestions on a meaningful public engagement process for plan development, as well as topics to be covered in future workshops. The District held subsequent public workshops on May 11, 2023, and September 7, 2023, to present and discuss plan development and to provide details on the control measure analyses, emissions inventory, and precursor modeling analysis.

At all workshops, the District and CARB provided both English and Spanish workshop materials, and provided simultaneous Spanish interpretation. Additionally, the District provided regular updates at public meetings, including the District Governing Board, Citizens Advisory Committee (CAC), and Environmental Justice Advisory Group (EJAG). The District published drafts of Chapter 4 (Precursor Demonstration) and Chapter 5 (Emissions Inventory) on August 28, 2023, for public review ahead of the September workshop. The *Proposed Initial SIP Requirements for the 2012 Annual PM_{2.5} Standard* was published on September 19, 2023, ahead of the October 19, 2023, public hearing. Public comments have been incorporated into the analyses as appropriate. The District and CARB will continue the public process for the remainder of the Plan requirements through 2023.