

# Executive Summary

*2015 Plan for the 1997 PM<sub>2.5</sub> Standard*  
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## Executive Summary

This plan addresses the federal mandates related to the 1997 PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS, or standard). Building on decades of developing and implementing active and effective air pollution control strategies, this plan contains Most Stringent Measures (MSM), Best Available Control Measures (BACM), additional enforceable commitments for further reductions in emissions, and ensures expeditious attainment of the 1997 standard. However, the tortured path that has led to this juncture where the San Joaquin Valley has to rewrite the attainment plan for an old standard illustrates the need for modernizing the antiquated provisions of the federal Clean Air Act (CAA).

On April 30, 2008, the District adopted the *2008 PM<sub>2.5</sub> Plan* satisfying all federal implementation requirements for the 1997 federal PM<sub>2.5</sub> standard. Per guidance from EPA, this plan addressed the 1997 PM<sub>2.5</sub> standard under Subpart 1 of CAA Title 1, Part D. Subsequently, in 2013, the D.C. Circuit Court ruled that EPA erred by solely using Clean Air Act Subpart 1 in establishing its PM<sub>2.5</sub> implementation rule, without consideration of the PM-specific provisions in Subpart 4. In June 2014, EPA then classified the Valley as a Moderate nonattainment area under Subpart 4 with an attainment date of April 5, 2015.

In 2012, after implementing much of the commitments in the *2008 PM<sub>2.5</sub> Plan*, the Valley was on the verge of attaining the 1997 PM<sub>2.5</sub> standard with an average annual concentration of 14.7 µg/m<sup>3</sup> and an average 24-hour concentration of 56.4 µg/m<sup>3</sup> at the Valley's historic peak PM<sub>2.5</sub> sites in Bakersfield. However, due to the extreme drought, stagnation, strong inversions, and historically dry conditions experienced over the winter of 2013-2014, attainment was impossible even if the Valley experienced zero PM<sub>2.5</sub> pollution for the last three quarters of 2014. The CAA includes provisions for excluding uncontrollable "exceptional events" from a region's attainment determination, but the current EPA framework specifically excludes stagnation and drought conditions. Given that attaining the standard in 2015 was physically impossible, the District was compelled to submit a formal request for reclassification to Serious nonattainment with a new attainment date of December 31, 2015. Unfortunately, the exceptional weather conditions experienced in 2013-2014 has also made it impossible to meet the new attainment deadline of December 31, 2015. Therefore, this plan also contains a request for a one-time extension of the attainment deadline for the 24-hour standard to 2018 and the annual standard to 2020.

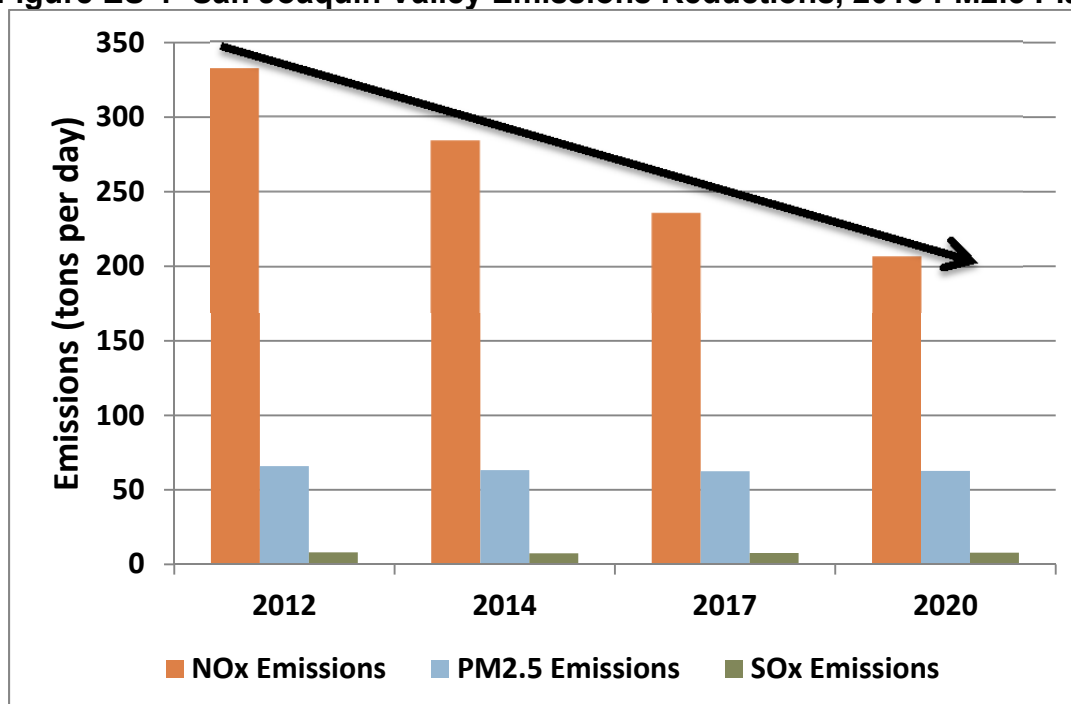
Adding further confusion, in accordance with federal mandates, in December 2012, the District adopted the *2012 PM<sub>2.5</sub> Plan* to address the 2006 federal PM<sub>2.5</sub> standard. This plan was also adopted under Subpart 1 of the Clean Air Act based on EPA's guidance at the time. To further complicate matters, a few days before the District adopted the *2012 PM<sub>2.5</sub> Plan*, EPA proposed a new PM<sub>2.5</sub> standard, which was finalized in January 2013 (2012 PM<sub>2.5</sub> Standard, 12 µg/m<sup>3</sup> annual).

The above actions trigger additional federal mandates that can best be described as chaotic, with multiple attainment plans required for the same pollutant with each standard requiring a separate attainment plan, leading to multiple overlapping requirements and deadlines. These mandates are summarized below:

- EPA classified the District as a Moderate nonattainment area under Subpart 4 for the 2006 federal PM<sub>2.5</sub> standard in June 2014.
- EPA proposed approval of the District's *2012 PM<sub>2.5</sub> Plan* as a Moderate area plan under Subpart 4 in January 2015.
- EPA proposed to reclassify the District as a Serious nonattainment area under Subpart 4 for the 2006 federal PM<sub>2.5</sub> standard in January 2015.
- District must submit a new attainment plan under a Serious classification for the 2006 federal PM<sub>2.5</sub> standard within 18 months from EPA's final action to classify the District as Serious nonattainment.
- EPA designated the Valley as a Moderate nonattainment area for the 2012 federal PM<sub>2.5</sub> standard effective April 15, 2015.
- District must first submit a Moderate plan for the 2012 federal PM<sub>2.5</sub> standard to justify and request reclassification to Serious nonattainment classification within 18 months of nonattainment designation by EPA.
- District must then submit a new attainment plan under a Serious classification for the 2012 federal PM<sub>2.5</sub> standard within 18 months from EPA's final action to classify the District as Serious nonattainment.
- For each of the standards, the District would have federally mandated attainment deadlines of 6 years from designation as a Moderate area, or 10 years from designation as a Serious area, and may need to request an extension depending on the timing of actions by EPA and mandated deadlines.

Through the comprehensive attainment strategy included in this *2015 Plan for the 1997 PM<sub>2.5</sub> Standard (2015 PM<sub>2.5</sub> Plan)*, the Valley will reduce NO<sub>x</sub> emissions by 38% between 2012 and 2020 (see Figure ES-1). In addition to these much-needed NO<sub>x</sub> reductions, the District's strategy also reduces direct PM<sub>2.5</sub> emissions that not only assist the Valley in attaining the standard as expeditiously as possible, but also reduce the PM<sub>2.5</sub> emissions that pose the greatest health impacts to Valley residents. These strategies, including upcoming measures to further reduce emissions from commercial charbroilers, reduce highly health-impactful PM<sub>2.5</sub> emissions where and when they matter most in Valley neighborhoods, and provide health benefits beyond simply attaining the federal standard.

Figure ES-1 San Joaquin Valley Emissions Reductions, 2015 PM2.5 Plan



In developing this plan, the District and the California Air Resources Board (ARB) took full advantage of the extensive scientific research and knowledge that has been developed to characterize the Valley's unique air quality chemistry and challenge. The District, through the San Joaquin Valleywide Air Pollution Study Agency, participated in and contributed to the expenditure of nearly \$30 million to support the California Regional Particulate Air Quality Study (CRPAQS). This study, and the subsequent research built on its foundation, has shed light on the complexity of PM<sub>2.5</sub> in the Valley. Additionally, recent health studies highlight the associated risks inherent in the complex components of PM<sub>2.5</sub>. Acknowledgement and understanding of this complexity is central to the *2015 PM<sub>2.5</sub> Plan* and was used to form the scientific foundation of this plan.

Using the extensive body of knowledge regarding formation of PM<sub>2.5</sub> in the Valley, ARB performed Relative Response Factor (RRF) modeling to predict future PM<sub>2.5</sub> concentrations throughout the Valley based on previous methodologies in the *2008 PM<sub>2.5</sub> Plan*. This modeling was performed consistent with EPA guidance, and involved sophisticated computer modeling and review by a team of technical staff, including close coordination with the District. In addition to the modeling by ARB, the District has also performed extensive analysis that provides additional supporting evidence that the plan will effectively bring the Valley into attainment. Overall, the modeling and supporting technical analysis demonstrate that the emissions reductions achieved through the plan's control strategy bring the entire Valley into attainment of the 1997 federal 24-hour PM<sub>2.5</sub> standard by 2018 and annual PM<sub>2.5</sub> standard by 2020.

The *2015 PM<sub>2.5</sub> Plan* was prepared through an involved public process that provided multiple opportunities for the general public and interested stakeholders to offer suggestions and comments for improving and strengthening the plan. The District has worked closely with these various stakeholders, including its partner agencies ARB and EPA, environmental and community advocacy groups, and business representatives to share information regarding the plan, and to receive comments and suggestions.

Numerous opportunities were provided for public input in 2014 during District Governing Board public hearings, Citizen's Advisory Committee public meetings, and Environmental Justice Advisory Group public meetings. The District also met with interested advocacy and industry representatives throughout the plan development process to address specific questions and comments, and solicit further suggestions for control strategies. The District held a public workshop for this plan on March 4, 2015 that outlined the air quality challenges faced by the Valley and potential strategies for responding to the challenge. The workshop was held at the District's offices in Modesto, Fresno, and Bakersfield and by webcast, with many participants attending and providing feedback during the workshop.

All of these meetings have provided opportunities for the public to provide verbal comments, and written comments have also been accepted throughout development of this plan. These comments have been integral to the development of this plan, and have been incorporated as appropriate. All significant comments and responses are summarized and posted on the District's website.