

# Executive Summary

*2016 PLAN FOR THE 2008 8-HOUR OZONE STANDARD*

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## Executive Summary

This 2016 Ozone Plan addresses the federal mandates related to the 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS). Building on decades of developing and implementing effective air pollution control strategies, this plan demonstrates that District regulatory measures meet and exceed federal Clean Air Act (CAA) requirements, includes additional commitments for potential further reductions in emissions, and ensures expeditious attainment.

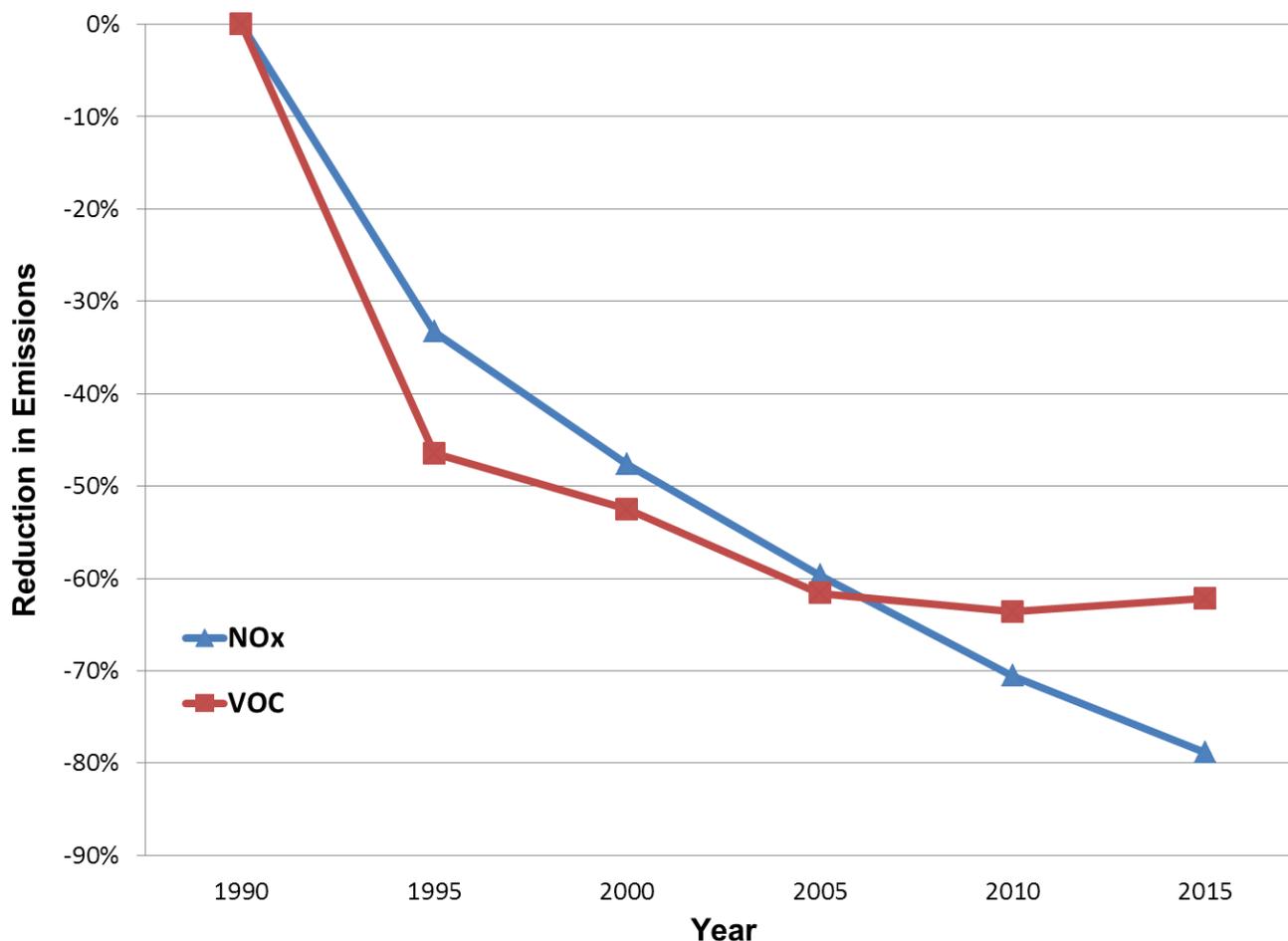
The deadline for the San Joaquin Valley (Valley) to attain the 2008 8-hour ozone standard is December 31, 2031. This requires another 207.7 tons per day in NO<sub>x</sub> reductions from stationary and mobile sources throughout the Valley. The measures identified in this plan do achieve the necessary reductions. The District could show expeditious attainment without the need to rely on “Black Box” provisions afforded under CAA §182(e)(5). Unfortunately, compliance with the contingency requirements under the federal Clean Air Act requires that the District hold back on 1.6 tons per day of NO<sub>x</sub> reductions. To ensure that the plan is approvable with the necessary contingencies, the plan needs to include a “Black Box”. The District however hopes that the state Air Resources Board (ARB) or the federal Environmental Protection Agency (EPA) can adopt and implement necessary strategies relating to mobile sources resulting in further reductions in emissions that could satisfy contingency requirements and avoid delays in attaining the standard expeditiously.

The District is pursuing legislative efforts to modernize the Clean Air Act with common sense provisions that help prevent similar circumstances as described above for this plan or for future plans where the contingency requirements can actually lead to delayed attainment or reliance on undefined strategies under “Black Box” provisions.

Since 1992, the District has adopted numerous attainment plans to reduce ozone and particulate precursor emissions. Leaving no stone unturned, the District has implemented these plans and adopted over 600 rules and rule amendments that have resulted in significant emissions reductions. Many of the District’s innovative rules and strategies, such as Indirect Source Review, Glass Melting Furnaces, and Conservation Management Practices, now serve as models for the rest of the nation. In addition to having the toughest air regulations in the nation, the District also has the most effective and efficient incentive grants program. Through implementation of District regulations and incentives, Valley businesses and residents have invested billions of dollars to reduce emissions. To date, the District’s incentive programs have invested a total of \$1.4 billion in public/private funding towards clean air projects, resulting in over 120,000 tons of emissions reduced.

Through these combined efforts, the Valley’s air quality is better than it has been at any other time on record. The ozone precursor emissions in the Valley are at historically low levels with approximately 80% reduction in NO<sub>x</sub> stationary source emissions since 1990 (see Figure ES-1).

Figure ES-1 Decrease in NOx/VOC Emissions from Stationary Sources



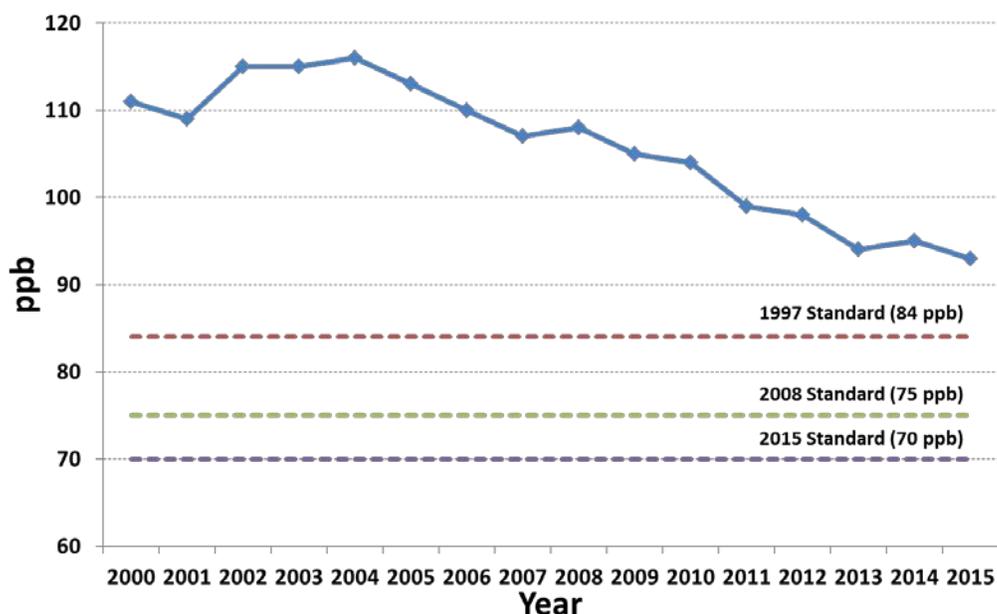
Despite strings of triple digit temperature and multiple wildfires, in 2015, the Valley experienced a record setting clean ozone season, achieving:

- Lowest 8-hour ozone design value on record for the Valley, the official metric used to measure progress towards meeting federal ozone standards (Figure ES-2)
- Lowest number of days exceeding the federal 75 ppb 8-hour ozone standard (Figure ES-3)
- Zero unhealthy days in the month of July
- Third consecutive year without violating the federal 1-hour ozone standard
- 91% reduction in Valley residents exposure to high ozone concentrations above the 84 ppb standard since 2002 (73% reduction in population exposure for the 75 ppb standard)

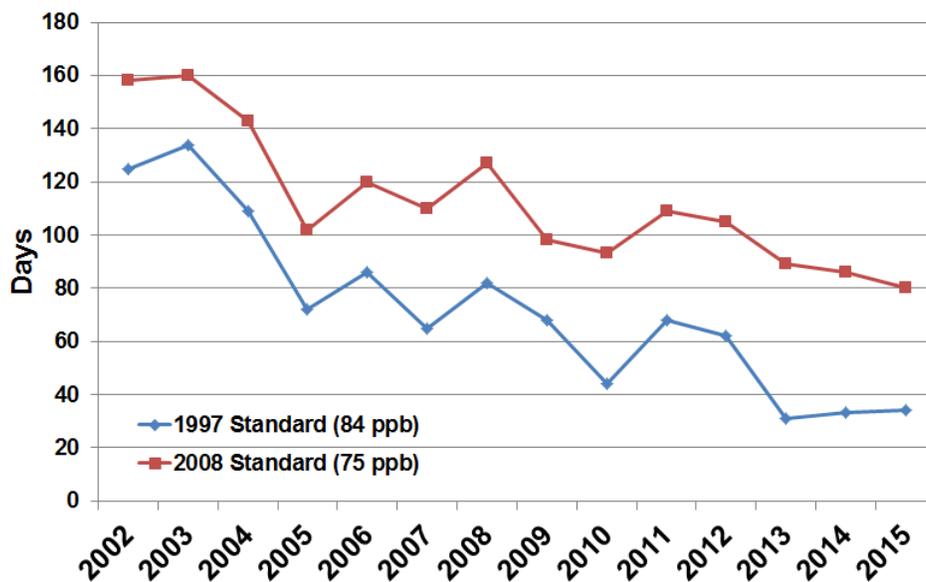
As a part of the positive trend in ozone air quality, the Valley is also on track to meet the federal 8-hour ozone standard of 84 ppb ahead of the projected 2023 attainment date included in the *2007 Ozone Plan*. With the ongoing improving trend in ozone air quality,

EPA also recently approved the District’s request for the 1-hour ozone clean data finding and has officially proposed to grant the San Joaquin Valley as attainment for the 1-hour ozone standard.

**Figure ES-2 Decrease in Valley’s 8-hr Ozone Design Value**



**Figure ES-3 Decrease in Days Exceeding Federal Ozone Standards**



Through the comprehensive stationary and mobile source control strategy that has been adopted from prior regulatory actions and that is now included in this plan, the San Joaquin Valley will reduce NOx emissions by over 60% between 2012 and 2031. The

ambient ozone concentrations will decrease dramatically in all areas of the Valley with Valley residents experiencing cleaner air over time. ARB used a modeled attainment test consistent with EPA's guidelines to predict future 8-hour ozone concentrations at each monitoring site in the Valley to demonstrate attainment. Modeling shows that the Valley will attain the 8-hour ozone standard by 2031 based on implementation of these ongoing control measures.

### ***Extensive Public Process***

This *2016 Ozone Plan* was prepared through an involved public process that provided multiple opportunities for the public and interested stakeholders to offer suggestions and comments for improving and strengthening the plan. The District initiated the public process for the *2016 Ozone Plan* in mid-2014. This public process included providing monthly updates at District Governing Board meetings, CAC meetings, and EJAG meetings. Each of these updates was accompanied by an opportunity for the public to provide comment, ask questions, or request additional information. Additionally, under the guidance of the District Governing Board, the Executive Director/Air Pollution Control Officer (APCO) formed the Public Advisory Workgroup (PAW) ad hoc committee. The PAW committee members consisted of representatives from regulated entities (industry, farms, dairy families and municipalities), community advocates, and advisors from EPA and ARB. The PAW committee held numerous meetings which were also open to the public. As part of the public process for developing this plan, the District also hosted a public workshop in May 2014 and two additional workshops in March 2016. These meetings provided opportunities for the public to provide verbal comments, and written comments have also been encouraged throughout development of this plan. These comments have been integral to the development of this plan, and have been incorporated as appropriate. A summary of significant comments and responses are summarized and posted as a part of this *2016 Ozone Plan*.

### ***Leaving No Stone Unturned to Achieve Expeditious Attainment***

As with all air quality attainment plans for the Valley, the District left no stone unturned in evaluating and identifying further opportunities to advance attainment of the ever-tightening ambient air quality standards for the development of this *2016 Ozone Plan*. This plan demonstrates that regulatory efforts of all sources of VOC and NO<sub>x</sub> emissions satisfy and even go beyond federal (Reasonably Available Control Technology) RACT standards. As part of our ongoing effort to identify additional emission reduction opportunities, the District is proposing in this plan to include regulatory commitments for evaluating the potential of including additional emission control requirements in District Rules 4311 (Flares) and 4694 (Wine Fermentation and Storage Tanks). Working closely with affected sources and through public development processes, the rule(s) will be amended to incorporate more stringent requirements as appropriate.

### ***Upcoming Attainment Plans to Address Latest Federal Air Quality Standards***

In addition to the multiple attainment plans that the District has already developed and implemented, the District is mandated under the Clean Air Act to develop and adopt a number of new ozone and particulate matter plans in the coming years. The degree of difficulty in meeting the new federal ambient air quality standards are unmatched by any other region in the nation.

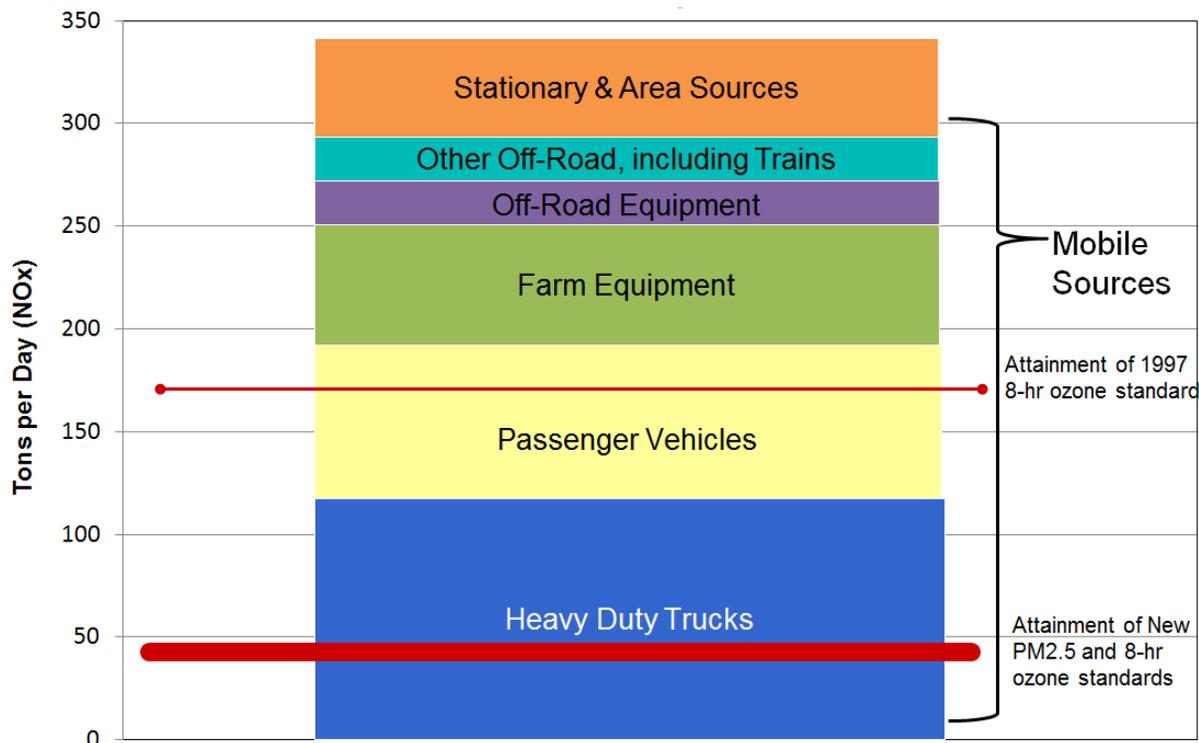
Attainment of the latest standards will require transformative changes and development of innovative control strategies to significantly reduce emissions from mobile sources, which now make up over 85% of the Valley's NO<sub>x</sub> emissions (see Figure ES-4). In crafting attainment plans, the District explores all feasible opportunities to reduce stationary source emissions. However the magnitude of potential reductions from stationary sources is miniscule compared to reductions needed to attain the PM<sub>2.5</sub> and ozone standards. The District, ARB, and EPA agree that the bulk of these emissions reductions will have to come from mobile sources, primarily through the deployment of incentive based measures.

Despite achieving significant emissions reductions through decades of implementing the most stringent stationary and mobile regulatory control program in the nation, NO<sub>x</sub> emissions reductions in the Valley must be reduced by an additional 90% in order to attain the latest federal ozone and PM<sub>2.5</sub> standards that now encroach on natural background levels. This air quality challenge is unmatched by any other region in the nation.

With over 85% of the Valley's remaining ozone and PM<sub>2.5</sub> precursor emissions now coming from mobile sources under state and federal jurisdiction, the Valley cannot reach attainment even if all stationary sources were to be shut down. While the District continues to leave no stone unturned in reviewing all existing stationary source categories and regulations for additional emissions reductions opportunities, attaining the federal standards is not possible without significant reductions in emissions from mobile source categories (see Figures ES-4 and ES-5).

Given the enormity of the reductions needed for attainment, mobile sources, particularly in the goods movement sector, must transition to near-zero emission levels through the implementation of transformative measures. The District does not have the authority to implement regulations requiring ultra-low tailpipe emissions standards on mobile sources. New state and federal regulations coupled with a robust incentive-based emission reduction strategy are necessary to have any chance to achieve the enormous reductions that are necessary to attain the federal standards.

**Figure ES-4 San Joaquin Valley NOx Emissions and Federal Air Quality Standards**



**Figure ES-5 San Joaquin NOx Emission Inventory and Targets for Attainment of Federal Air Quality Standards**

