

Update On Upcoming Planning Efforts For Attainment of the 2015 8-hour Federal Ozone Air Quality Standard

March 17, 2020

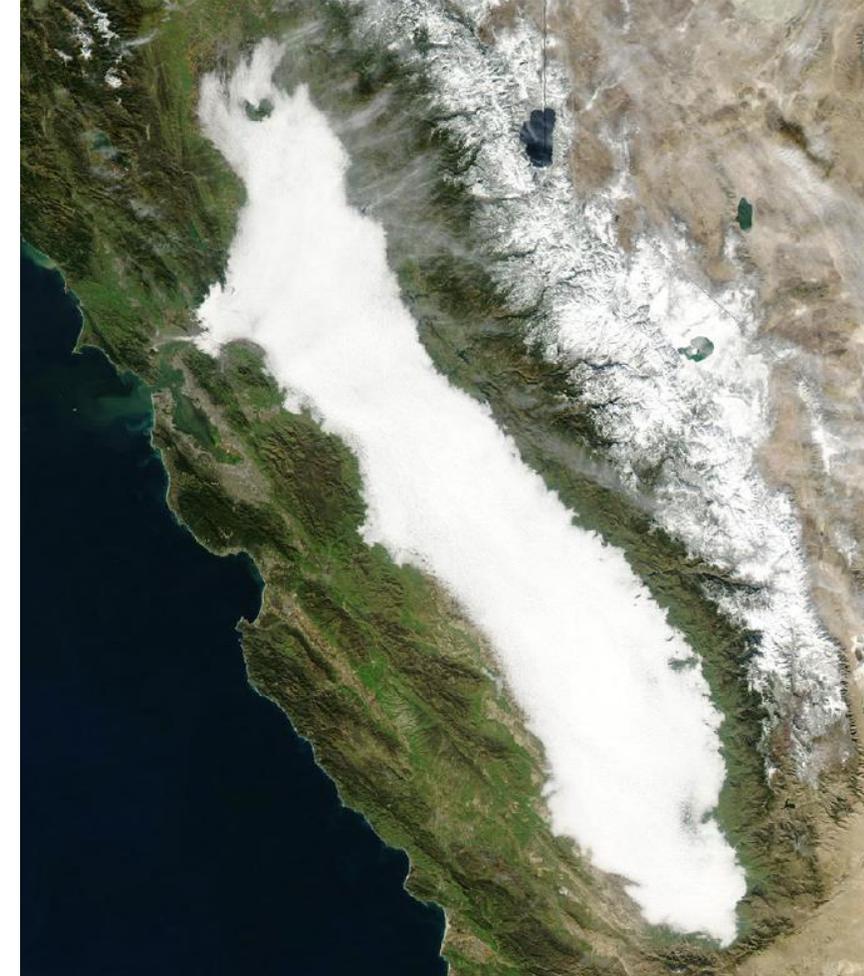
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Valley Progress Attaining Federal Ozone Standards

- District has long history of developing and implementing ozone air quality strategies over last several decades
 - Numerous plans achieving significant NO_x and VOC reductions
 - Adopted nearly 650 of most stringent rules in the nation
 - Nation-leading state mobile source strategies
 - Innovative clean air incentive programs accelerating deployment of cleanest technologies (\$2.7 billion public/private investment achieving 162,000 tons of reductions)
- Significant emissions reductions have led to sustained and measureable ozone air quality improvements

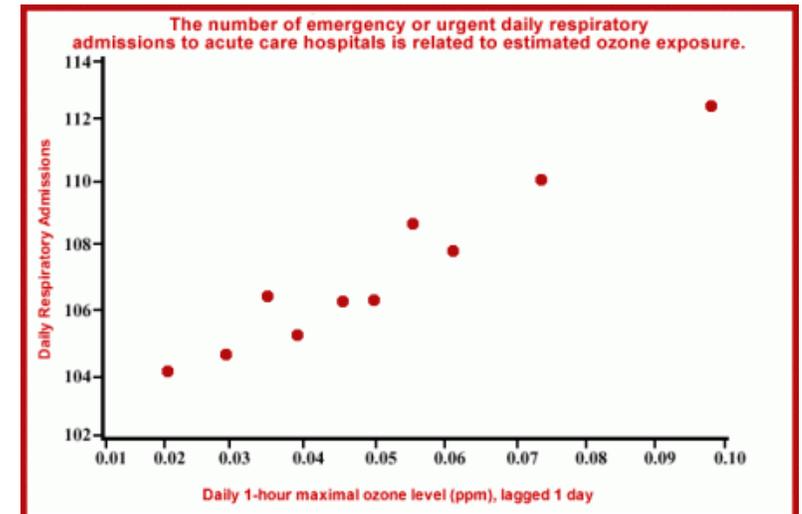
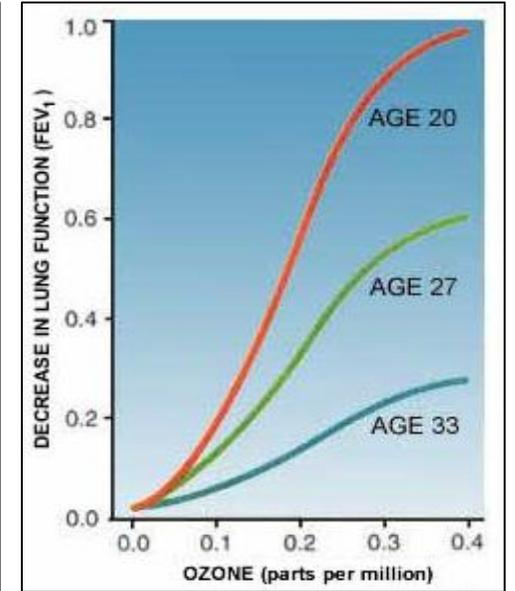
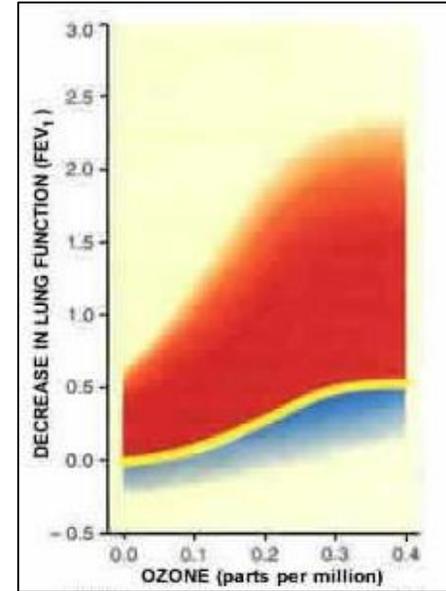
Valley Ozone Air Quality Challenge

- Ozone formed by reactions between ozone precursor emissions and sunlight
 - NO_x: combustion primarily from mobile sources
 - VOCs: biogenic, consumer, stationary, mobile sources
- Valley's topography and summertime weather patterns trap ozone precursor emissions on Valley floor for extended periods of time
- Valley faced with variety of challenges including role as major goods movement corridor, high population growth, pollution transport from other areas, wildfires
 - Over 85% of remaining NO_x emissions come from mobile sources under state and federal jurisdiction



Ozone Impacts on Public Health

- Ozone most significantly impacts people with asthma, children, older adults, and outdoor workers
- Exposure to ozone causes coughing, throat irritation, pain, burning, or discomfort in the chest, and chest tightness or shortness of breath
 - Ozone impacts lung function and aggravates existing respiratory conditions, such as asthma and COPD
 - Leads to increased medication use, emergency visits and hospital admissions

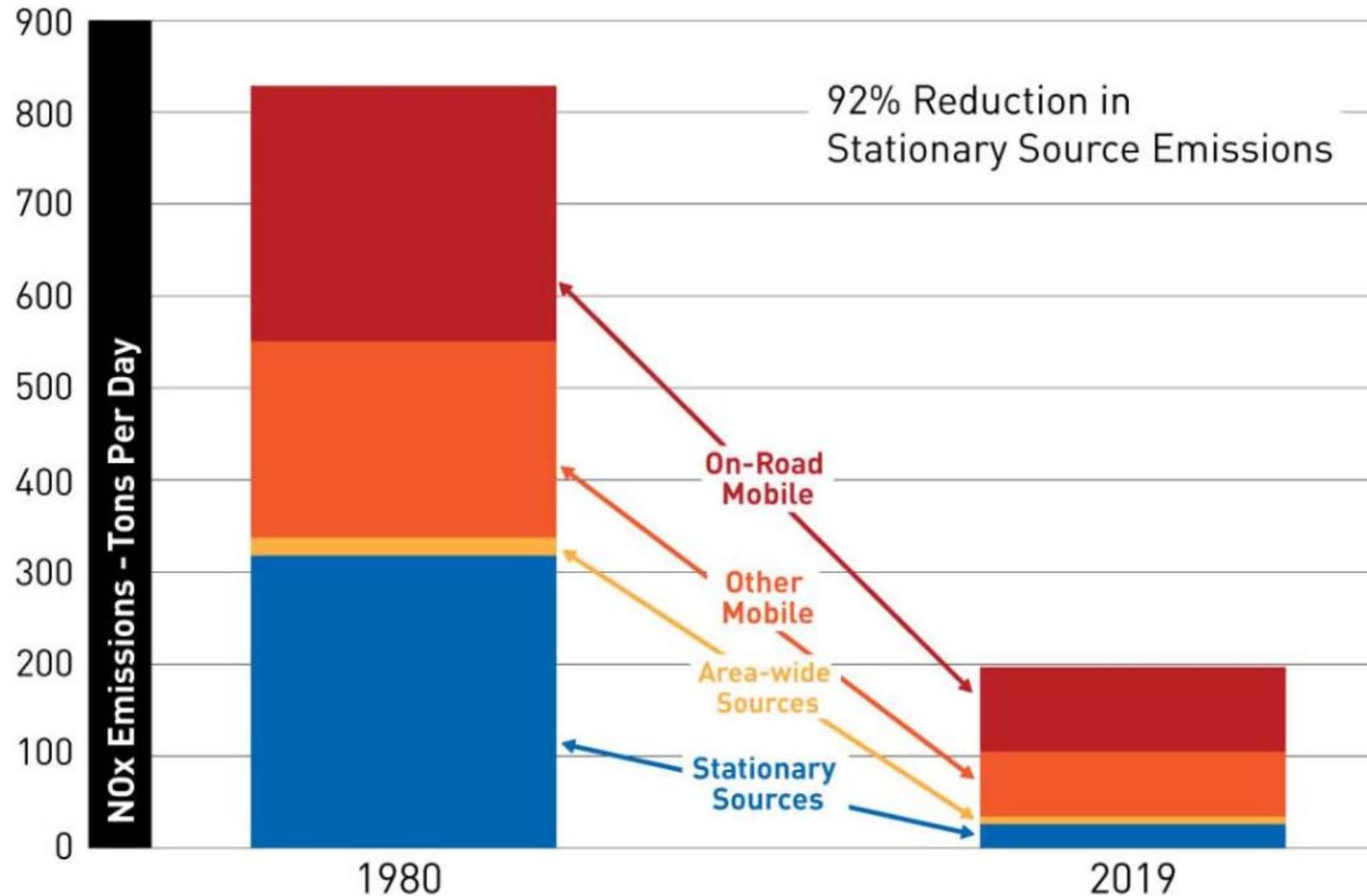


Source: US EPA, 2016

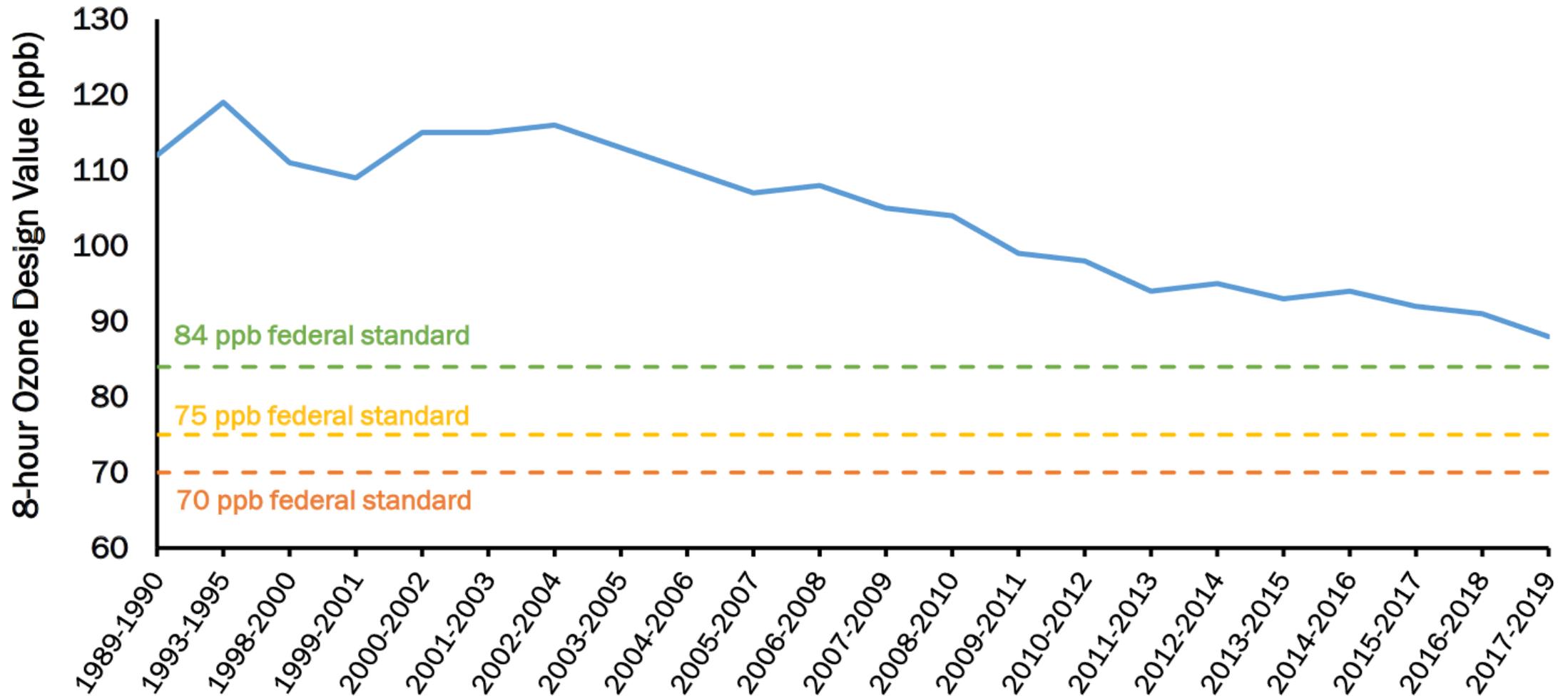
Progress with Federal Ozone Standards

- **1979 1-hour Ozone Standard of 124 ppb**
 - First and only region in the nation with “Extreme” nonattainment classification to attain standard
- **1997 8-hour Ozone Standard of 84 ppb**
 - Valley experienced fewest days of exceedances in 2019
 - “Black Box” closed in recent CARB report
 - Valley on track to attain by 2023 (single year value for 2019 at 84 ppb)
- **2008 8-hour Ozone Standard of 75 ppb**
 - *2016 Ozone Plan* outlined strategies for attainment
 - Valley expected to achieve necessary reductions to meet standard by deadline of 2031

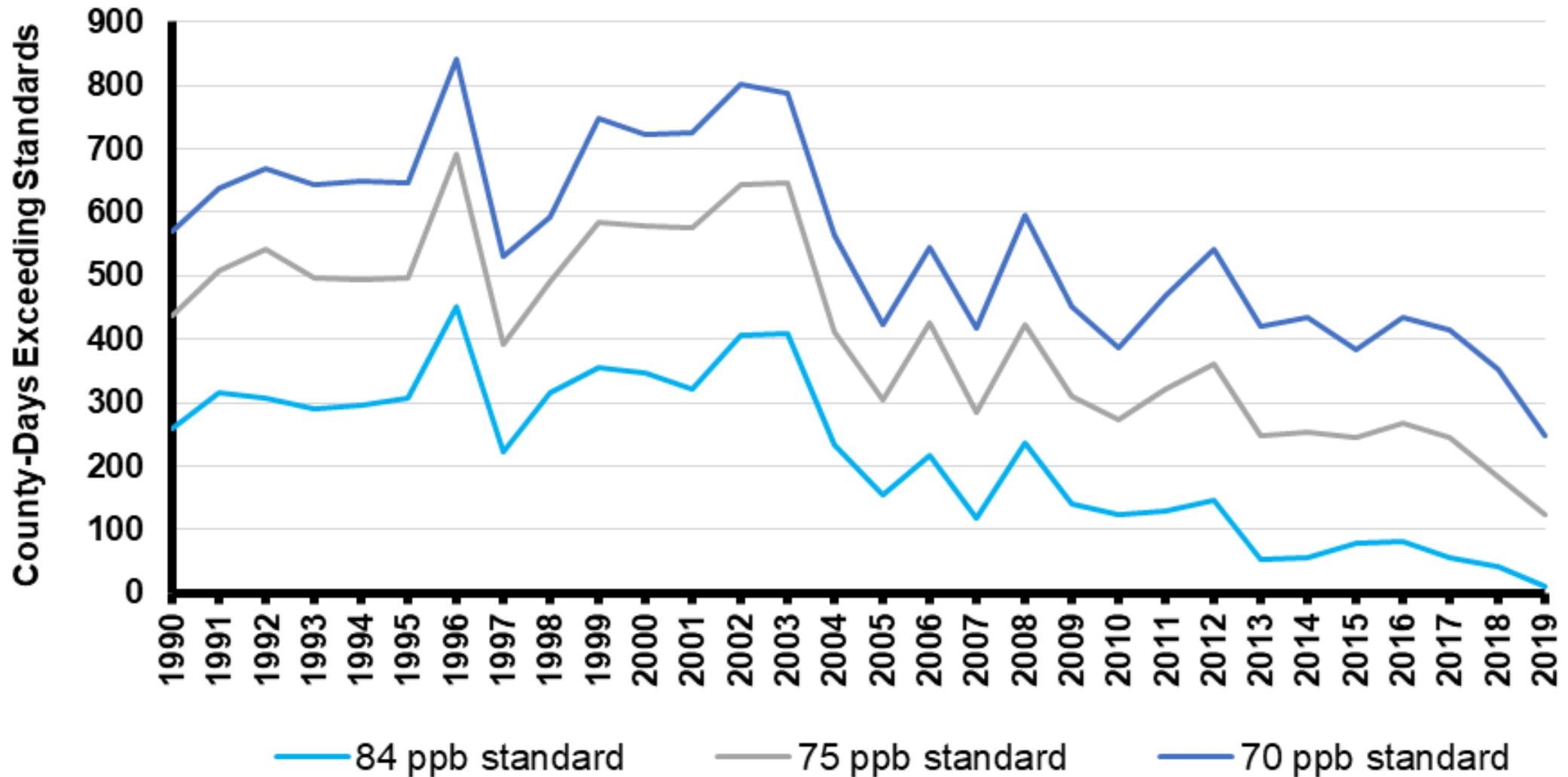
Valley NOx Emissions Reduced Significantly



Valley 8-hour Ozone Design Value Trend



County-Day 8-hour Ozone Exceedance Trends



2015 8-hour Ozone Standard

- EPA required to review standards for ozone, PM2.5, and other criteria pollutants every 5 years through extensive process
- October 2015 – EPA lowered the 8-hour ozone standard from 75 ppb to 70 ppb
- Valley designated as “Extreme” nonattainment by EPA in 2018, establishes attainment deadline of 2037 (submittal deadline of 2038)
- EPA’s new implementation rule identifies planning elements required to be submitted to EPA, and timelines for when each element is due

Federal Planning Requirements for 2015 8-hour Ozone Standard



Reasonably Available Control Technology (RACT) Demonstration

- RACT, or control technology that is reasonably available considering technological and economic feasibility, is required at existing sources in nonattainment areas
- For 2015 ozone standard, updated RACT demonstration must be submitted for incorporation into the State Implementation Plan (SIP)
- Per EPA implementation rule, review of RACT requirements to include:
 - Evaluation of rules affecting sources covered by EPA Control Technique Guidelines (CTGs) to ensure RACT is being implemented in the Valley
 - Demonstration that all “major sources” of NO_x and VOCs are required to implement at least RACT levels of emissions control

Reasonably Available Control Technology (RACT) Demonstration (cont'd)

- Upcoming RACT demonstration builds upon comprehensive analyses conducted in past RACT SIPs and attainment plans
 - District rules generally far exceed RACT requirements
 - RACT analysis supported by extensive analysis in *2018 PM2.5 Plan* and expedited BARCT review under AB 617
- District staff to present RACT SIP to the Governing Board by July 2020
 - Public input and questions are welcomed
 - 30-day review period prior to public hearing
 - Regular updates at public meetings and workshops, including District Governing Board, Citizens Advisory Committee, Environmental Justice Advisory Group

Updated Emissions Inventory

- The statewide emissions inventory, maintained by CARB, is a systematic listing of the sources of air pollution and the amount of pollution emitted from each source or category
- CARB required to submit updated statewide inventory to EPA in 2020
 - District coordinating with CARB to update District emissions inventory categories and review CARB categories utilizing most recent models and methodologies
- Upon completing review of emissions inventory categories, CARB will adopt and submit the statewide inventory to EPA

SAN JOAQUIN VALLEY UNIFIED APCD DISTRICT		
STATIONARY SOURCES		
SUMMARY CATEGORY NAME		
FUEL COMBUSTION		
ELECTRIC UTILITIES		
COGENERATION		
OIL AND GAS PRODUCTION (COMBUSTION)		
PETROLEUM REFINING (COMBUSTION)		
MANUFACTURING AND INDUSTRIAL		
FOOD AND AGRICULTURAL PROCE		
SERVICE AND COMMERCIAL		
OTHER (FUEL COMBUSTION)		
* TOTAL FUEL COMBUSTION		
SUMMARY CATE		
WASTE DISPOSAL		
SEWAGE TREATMENT		
LANDFILLS		
INCINERATORS		
SOIL REMEDIATION		
OTHER (WASTE DISPOSAL)		
* TOTAL WASTE DISPOSAL		
SUMMARY CATE		
CLEANING AND SURFACE COATING		
LAUNDERING		
DEGREASING		
COATINGS AND RELATED PROCESSES		
PRINTING		
ADHESIVES AND SEALANTS		
OTHER (CLEANING AND SURFACE COATING)		
SUMMARY CATE		
INDUSTRIAL PROCESSES		
CHEMICAL		
FOOD AND AGRICULTURE		
MINERAL PROCESSES		
METAL PROCESSES		
WOOD AND PAPER		
GLASS AND RELATED PRODUCTS		
ELECTRONICS		
OTHER (INDUSTRIAL PROCESSES)		
* TOTAL INDUSTRIAL PROCESSES		
** TOTAL STATIONARY		
SUMMARY CATE		
SOLVENT EVAPORATION		
CONSUMER PRODUCTS		
ARCHITECTURAL COATINGS AND R		
PESTICIDES/FERTILIZERS		
ASPHALT PAVING / ROOFING		
* TOTAL SOLVENT EVAPORATION		
SUMMARY CATE		
MISCELLANEOUS PROCESSES		
RESIDENTIAL FUEL COMBUSTION		
FARMING OPERATIONS		
CONSTRUCTION AND DEMOLITION		
PAVED ROAD DUST		
UNPAVED ROAD DUST		
FUGITIVE WINDBLOWN DUST		
FIRES		
MANAGED BURNING AND DISPOSAL		
COOKING		
OTHER (MISCELLANEOUS PROCESSES)		
* TOTAL MISCELLANEOUS PROCESSES		
** TOTAL AREAWIDE		
SUMMARY CATEGORY NAME		
MOBILE SOURCES		
SUMMARY CATEGORY NAME		
ON-ROAD MOTOR VEHICLES		
LIGHT DUTY PASSENGER (LDA)		
LIGHT DUTY TRUCKS - 1 (LDT1)		
LIGHT DUTY TRUCKS - 2 (LDT2)		
MEDIUM DUTY TRUCKS (MDV)		
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDGT1)		
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDGT2)		
MEDIUM HEAVY DUTY GAS TRUCKS (MHDGT)		
HEAVY HEAVY DUTY GAS TRUCKS (HHGT)		
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDDT1)		
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDDT2)		
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDDT)		
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDDT)		
MOTORCYCLES (MCY)		
HEAVY DUTY DIESEL URBAN BUSES (UBD)		
HEAVY DUTY GAS URBAN BUSES (UBG)		
SCHOOL BUSES - GAS (SBG)		
SCHOOL BUSES - DIESEL (SBD)		
OTHER BUSES - GAS (OBG)		
OTHER BUSES - MOTOR COACH - DIESEL (OBC)		
ALL OTHER BUSES - DIESEL (OBD)		
MOTOR HOMES (MH)		
* TOTAL ON-ROAD MOTOR VEHICLES		
SUMMARY CATEGORY NAME		

Emission Statement Certification

- Federal CAA requires that areas designated as nonattainment of an ozone standard must annually submit NO_x and VOC emissions from sources in the area
- SIP-approved District Rule 1160 (Emission Statements)
 - Applies to stationary sources which may emit NO_x or VOCs above specified thresholds
 - Requires submittal of annual emissions statements
- EPA implementation rule requires that by 2020 the District review/certify that Rule 1160 remains adequate for implementing the requirements of the 2015 8-hour ozone standard

New Source Review Certification

- District Rule 2201 (New Source Review):
 - Implements state and federal new source review requirements for permitted stationary sources
 - Designed to allow construction and operation of new or modified stationary sources without interfering with progress towards attainment of federal air quality standards
- Implementation rule requires District to review/certify by August 2021, that the District's NSR Program (Rule 2201), remains adequate for implementation of the requirements of the 2015 8-hour ozone standard

Development of 2022 Ozone Plan

- District staff working with CARB to conduct regional modeling and other air quality analyses
 - Will establish extent of challenge and emissions reductions needed for attainment
 - Important for modeling to incorporate latest emissions inventory information, ongoing reductions from existing measures, background ozone concentrations, and other Valley-specific information
- New plan must build on ongoing efforts by CARB, EPA, residents, businesses, and other Valley stakeholders to implement existing plans and strategies
 - Coordinate plan strategies to effectively meet overlapping requirements
 - In addition to direct PM_{2.5}, *2018 PM_{2.5} Plan* focuses on reducing NO_x emissions, which will help with both ozone and PM_{2.5} air quality challenges

Development of 2022 Ozone Plan (cont'd)

- Planning elements required for the 2015 8-hour ozone standard will be developed through extensive public process
- Clear and effective stakeholder engagement processes will be critical to reducing potential confusion about overlapping efforts required by state and federal mandates
 - Critical as District works concurrently on RACT SIP, *2018 PM2.5 Plan* implementation, and BARCT reviews
- District staff will regularly present updates about plan development at public workshops and meetings, including meetings of the Governing Board, Citizen Advisory Committee (CAC), and the Environmental Justice Advisory Group (EJAG)

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Open Discussion

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