

# Update on Valley Air Quality Efforts

AAPCA 2023 Spring Meeting

April 4-6, 2023

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San Joaquin Valley Air Pollution Control District

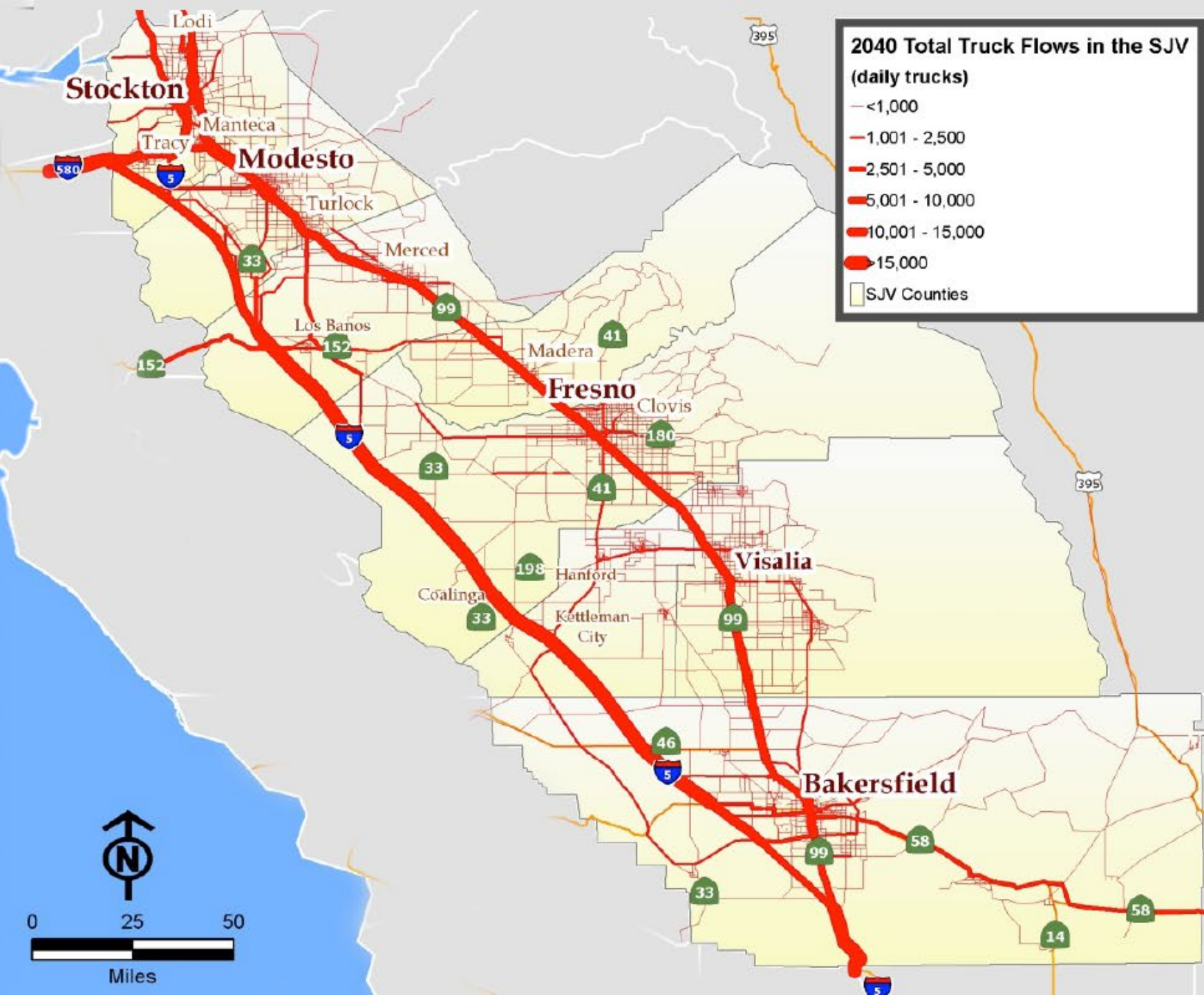
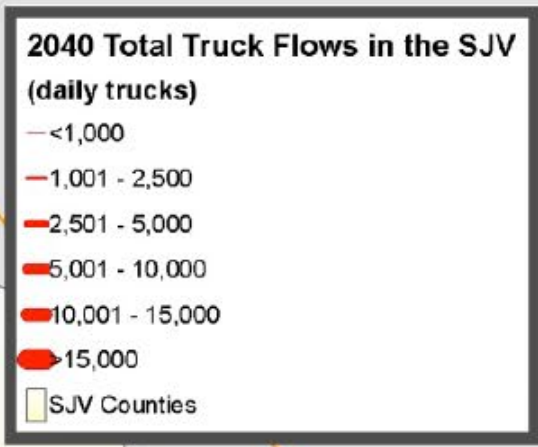




**SAN JOAQUIN VALLEY**  
Unparalleled air quality challenge



Valley serves as  
key **GOODS**  
**MOVEMENT**  
**CORRIDOR**



# Sources of Air Pollution

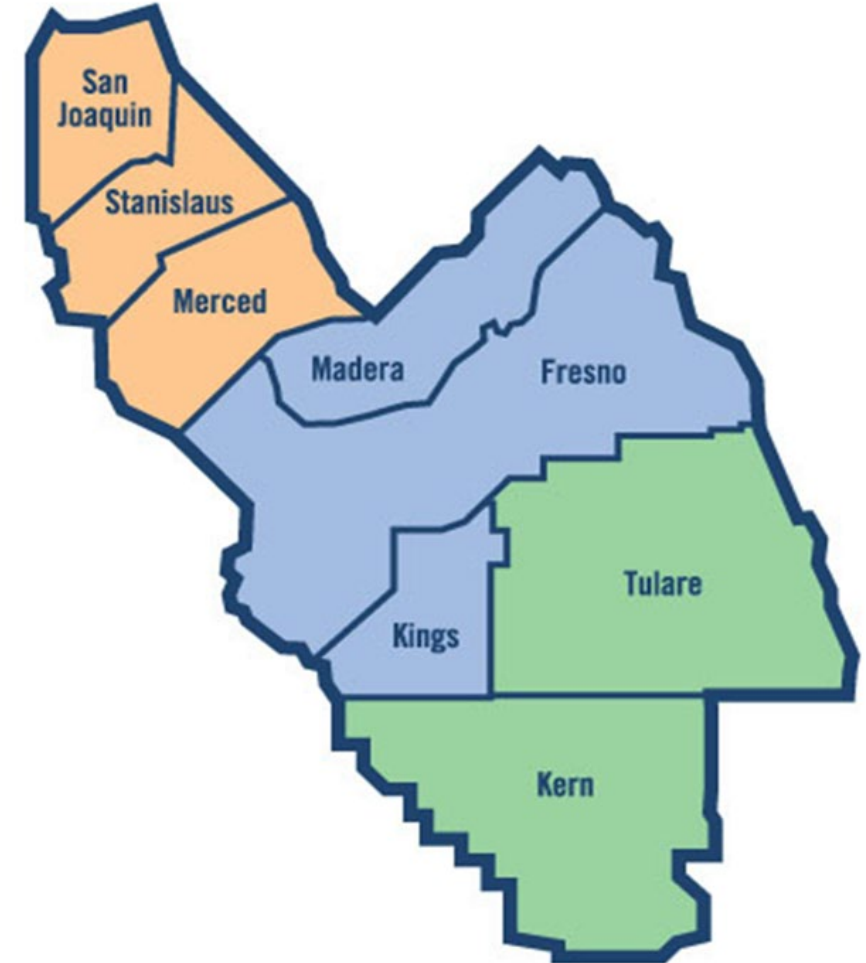
- Emissions come from variety of sources, all contributing to regional air pollution





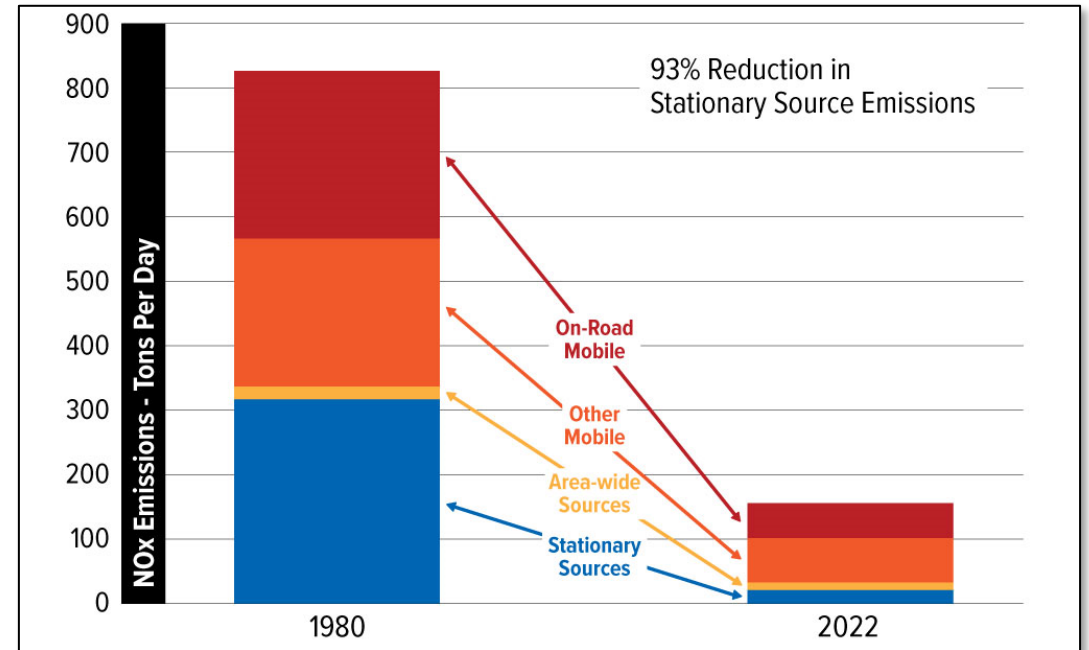
# Valley Air District

- Regional agency responsible for air quality in 8 counties
  - *San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare & Valley portion of Kern*
- 15 member Governing Board
- Regulates stationary sources (CARB/EPA responsible for mobile sources)
- Provides grant funding
- Responsible for meeting EPA & CARB mandates to improve public health



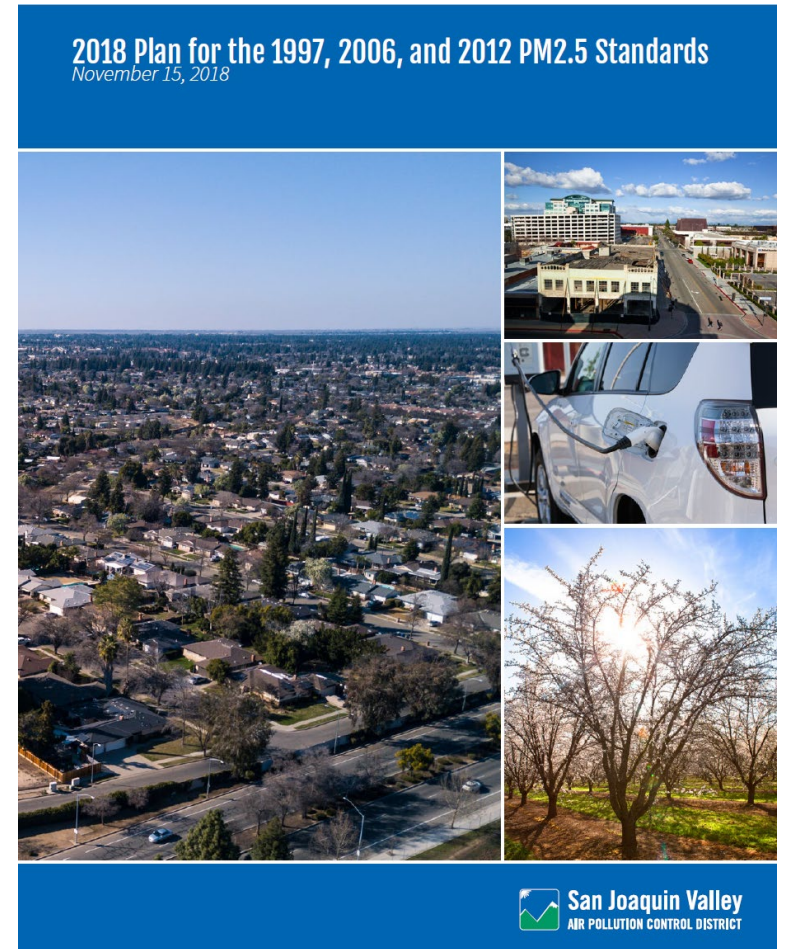
# Adopted Controls Are Improving Air Quality

- Governing Board has adopted numerous attainment plans and air quality control strategies to address federal standards
  - Stationary source ozone and PM-forming NOx emissions reduced by over 90% through hundreds of regulatory actions
- CARB has adopted numerous mobile source emissions controls
- District/CARB combined efforts represent nation's toughest emissions control program
- Strong incentive programs (\$5 billion in public/private investment)
- Through significant clean air investments, Valley continues to make major improvements with respect to air quality



# Ongoing PM2.5 Planning Efforts

- *2018 PM2.5 Plan* adopted by District/CARB to address latest PM2.5 standards
  - Strategy for bringing Valley into attainment with 1997, 2006, and 2012 PM2.5 standards (attainment deadlines 2023, 2024, and 2025 respectively)
  - Plan includes stringent stationary and mobile source control measures, as well as incentive-based control measures to accelerate deployment of new clean vehicles, equipment, and technologies across a variety of sectors
  - Vast majority of District’s emission reduction commitments achieved through enhanced regulations
- Plan revision to address 1997 PM2.5 standard adopted and submitted to EPA in October 2021

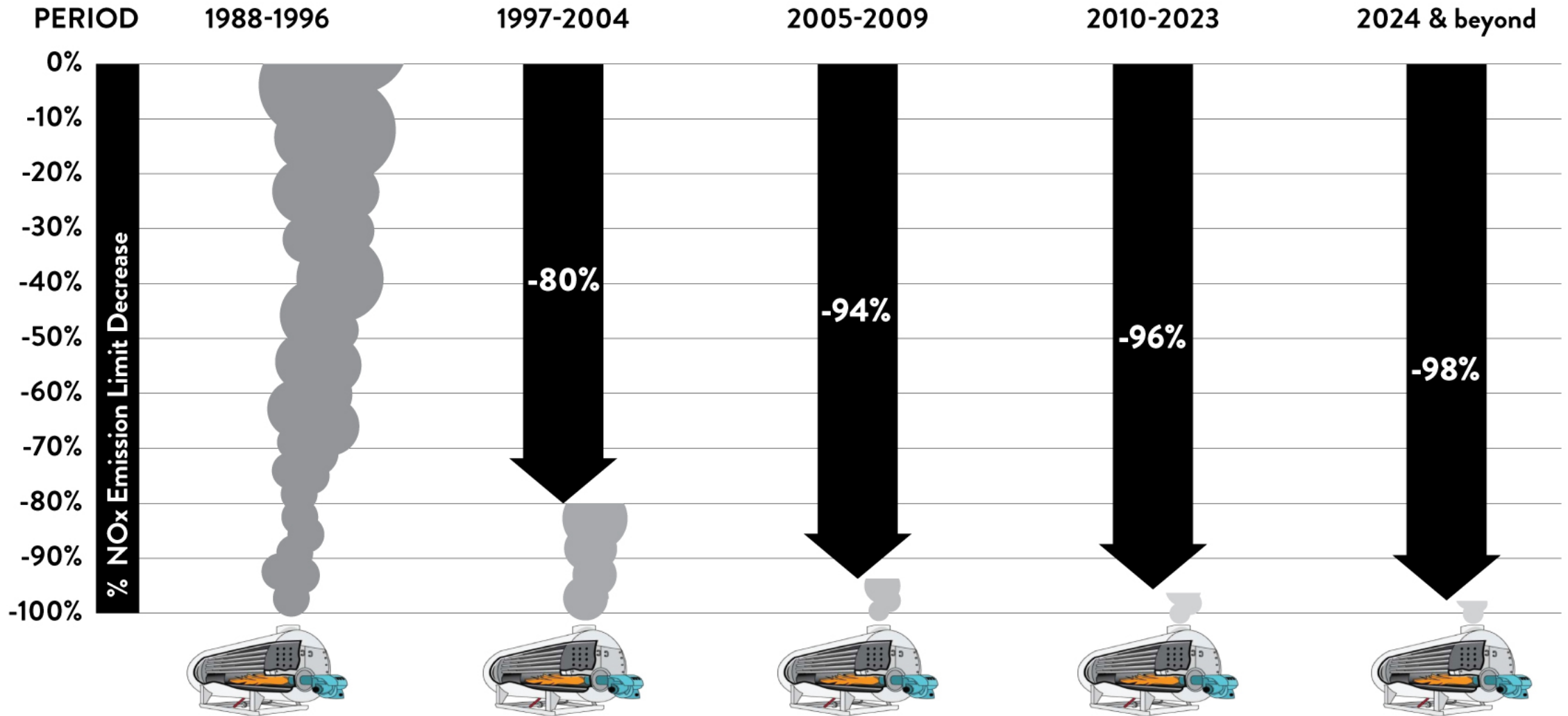


# Recent Regulatory Actions Under Plan Commitments

Measure	Status
Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters)	Adopted Jun. 2019
Rule 4311 (Flares)	Adopted Dec. 2020
Rules 4306/4320 (Boilers, Steam Generators, Process Heaters)	Adopted Dec. 2020
Rule 4692 (Commercial Underfired Charbroiling)	Strategy Adopted Dec. 2020
Rule 4103 (Ag Burn Phase-out)	Adopted Jun. 2021
Rule 4702 (Internal Combustion Engines)	Adopted Aug. 2021
Burn Cleaner Incentive SIP Measure	Adopted Nov. 2021
Rule 4354 (Glass Melting Furnaces)	Adopted Dec. 2021
Rule 4352 (Solid Fuel Boilers, Steam Generators, Process Heaters)	Adopted Dec. 2021
Rule 4550 (Conservation Management Practices)	Rule development ongoing
Rule 4401 (Steam-Enhanced Crude Oil Production Wells)	Rule development ongoing
Rule 4409 (Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities)	Rule development ongoing
Rule 4455 (Components at Petroleum Refineries, Gas Liquids, Processing Facilities, and Chemical Plants)	Rule development ongoing
Rule 4623 (Storage of Organic Liquids)	Rule development ongoing
Rule 4624 (Transfer of Organic Liquid)	Rule development ongoing
Rule 4402 (Crude Oil Production Sumps)	Rule development ongoing



# Example: Significant Emissions Reductions from Industrial Boilers



# Timely Action Needed on Key Issues

## EPA approved some key PM2.5 actions, but significant pending actions remain

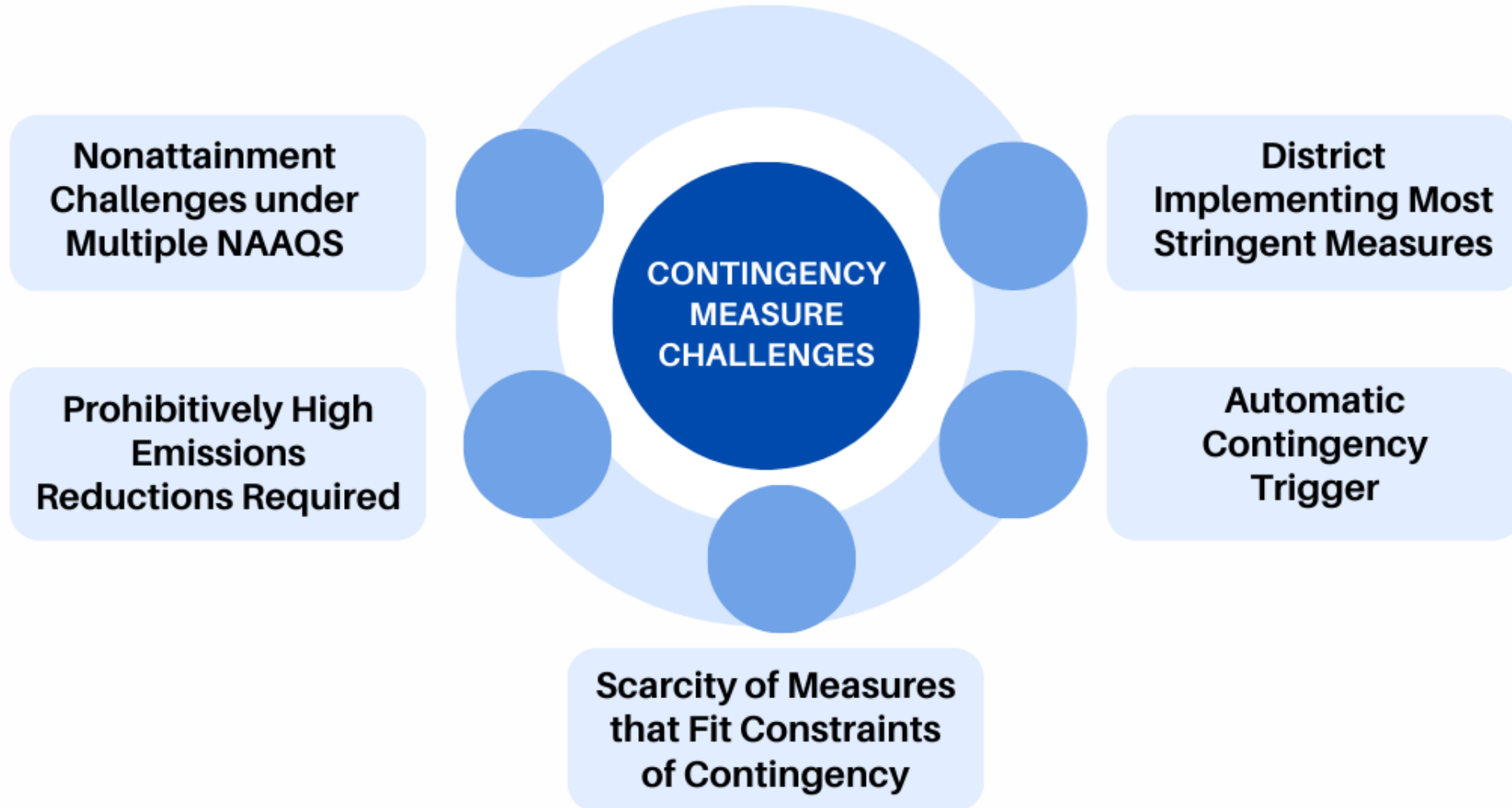
- 1997 PM2.5 Standard: District/CARB submitted SIP revision in Oct 2021, awaiting EPA approval
- 2012 PM2.5 Standard: District/CARB working on updated Plan in response to EPA reversal on prior proposed approval
- Contingency Measures for PM2.5 Standards: District/CARB working to address new requirements per recently released EPA guidance

## EPA disapproval or inaction can result in devastating consequences to Valley

- Sanctions clocks for Contingency and other Plan elements (18 to 24 months)
- EPA obligated to approve contingency submission or develop proposed Federal Implementation Plan by July 31, 2023 under recently signed consent decree
- District/CARB continuing to offer support to EPA in evaluating high level of stringency of stationary and mobile source programs (limited opportunities for placing measures in reserve for contingency)

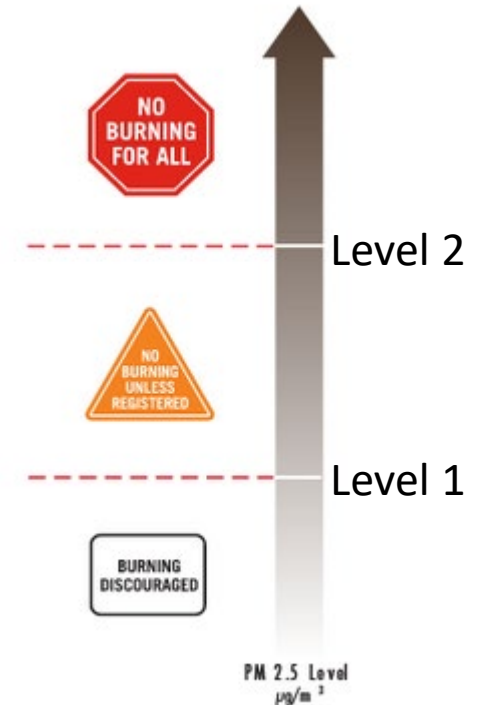


# Addressing Contingency Measure Requirements



# Potential Contingency Measures – Residential Wood Burning

- Rule 4901 recently approved by EPA as Most Stringent Measure
- Contingency measures would establish progressively more stringent curtailment level(s) within Rule 4901 upon issuance of final determination by EPA that Valley failed to:
  - (1) Meet any RFP requirement; (2) meet any quantitative milestone in attainment plan; (3) submit a quantitative milestone report; or (4) attain applicable NAAQS by applicable attainment date
- South Coast rule contains contingency measure provisions that are less stringent than District’s current Rule 4901 requirements (fully approved by EPA in April 2022 as meeting PM2.5 contingency)





# Potential Contingency Measures – Residential Wood Burning

(cont'd)

<i>Contingency Concept</i>	Hot-Spot County ( $\mu\text{g}/\text{m}^3$ )		Non Hot-Spot County ( $\mu\text{g}/\text{m}^3$ )	
	Level 1	Level 2	Level 1	Level 2
Current	12	35	20	65
Contingency Measure 1	11	35	19	65
Contingency Measure 2	10	35	18	65
Contingency Measure 3	9	35	17	65
Contingency Measure 4	8	35	16	65

*Any non hot-spot county that triggers any contingency element would be subject to hot-spot county Level 1 and 2 curtailment levels*

- *Example: Valley-wide contingency issues (RFP, quantitative milestones) would result in all Valley counties being subject to hot-spot curtailment levels*
- *Example: Non hot-spot county/counties not meeting attainment target would then be subject to hot-spot curtailment levels*
- *Hot-spot counties: Madera, Fresno, Kern. Non Hot-spot counties: San Joaquin, Stanislaus, Merced, Kings, Tulare*

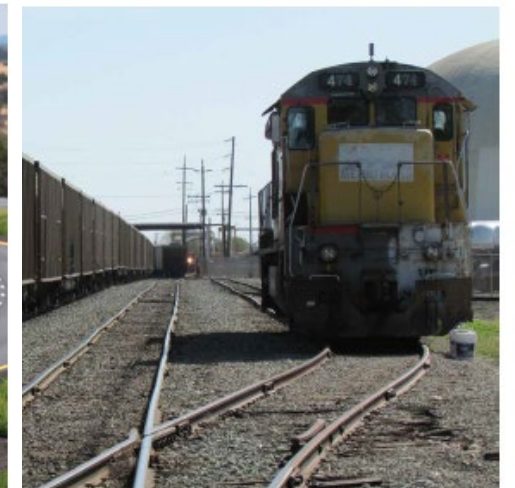
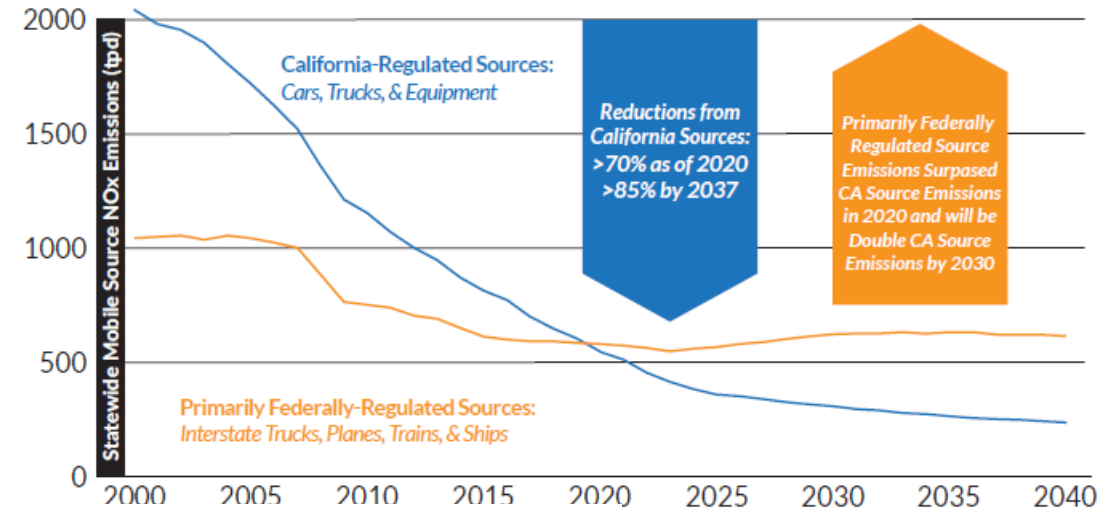
# 2023 Plan for 2012 PM2.5 Standard

- District currently working with CARB on updated Plan for 2012 standard, by the original due date of December 31, 2023
  - In response to EPA’s reversal of proposed approval and subsequent withdrawal of plan by CARB/District
- Elements to be submitted by June 2023: emission inventory, precursor analysis, BACM/MSM analysis, nonattainment new source review (NSR)
- Elements to be submitted by December 2023: emission control strategy, modeling analysis, attainment demonstration, other plan elements
- Initial District/CARB public workshop held March 23, 2023 provided detail of planning process over this year
- Plan may also include additional analyses for 2006 PM2.5 standard



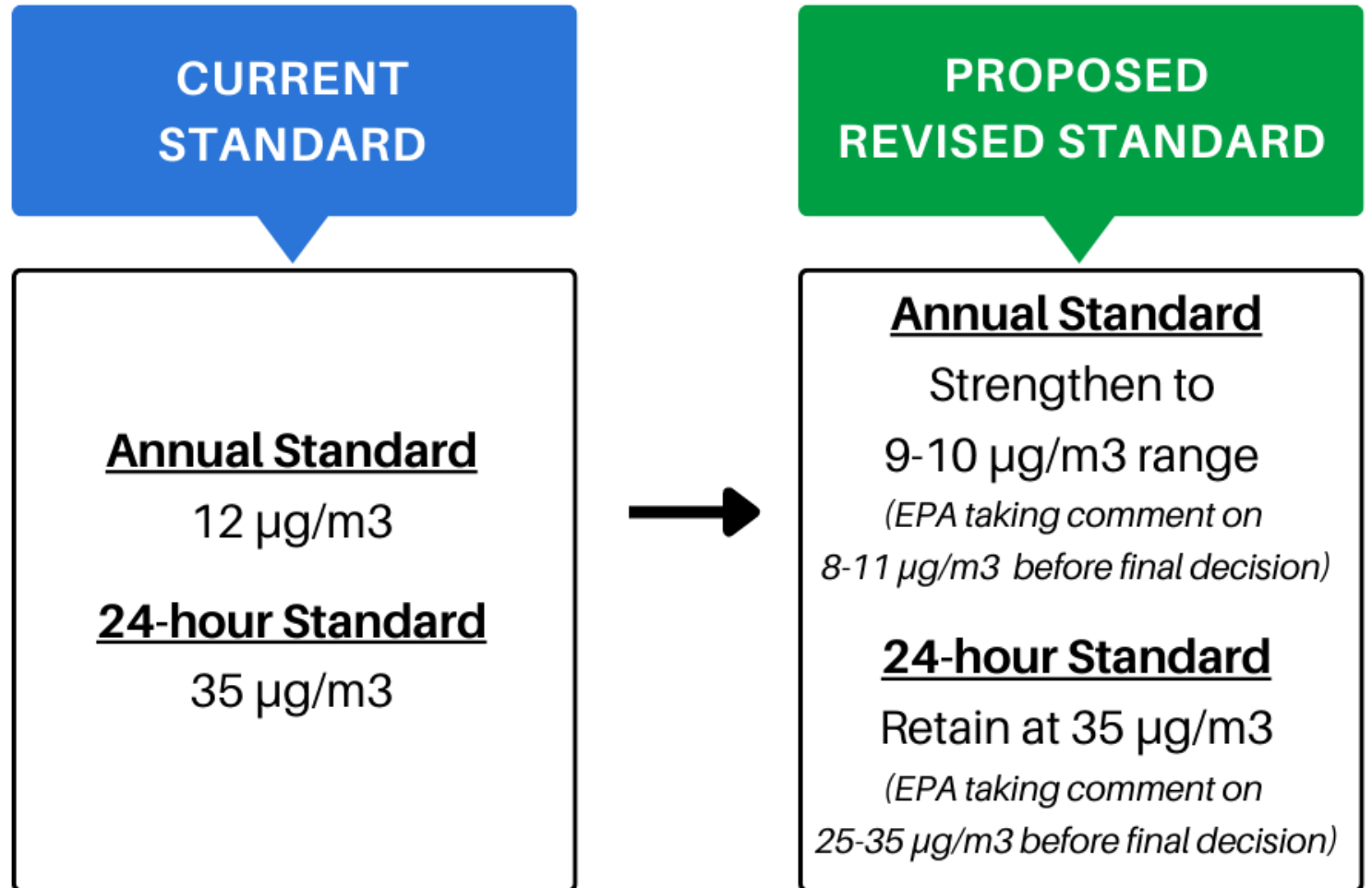
# EPA Support Needed to Meet Clean Air Act Requirements – Federal Mobile Sources

- Mobile sources make up majority of emissions
- Given stringent District/CARB regulations, increasingly critical that federal government provide necessary actions and resources to reduce emissions under federal control
  - Interstate trucks, locomotives, aircraft, etc.
- Unprecedented funding opportunities under Inflation Reduction Act and Bipartisan Infrastructure Law, must prioritize:
  - Areas in extreme/serious nonattainment
  - Environmental Justice communities
  - Affordable housing and sustainable community efforts
  - Port/freight, sustainable agriculture, forest management, and energy programs



# New Proposed Federal PM2.5 Standard

- January 6, 2023: EPA proposed new PM2.5 standard, including variety of other related elements
- Can only consider health effects, not implementation challenges



# Valley Challenges to Attain New PM2.5 Standard

- San Joaquin Valley designated “extreme” nonattainment for ozone and “Serious” nonattainment for PM2.5
  - Given that District rules are the most stringent in the nation, further emission reductions will be more difficult to achieve
- Latest *2022 Ozone Plan* projects that Valley NOx levels must reach approximately 62 tons per day to meet 70 ppb 8-hour ozone standard
  - Requires another 72% NOx reduction from baseline levels, being achieved through strict controls on stationary sources and significant emission reductions from mobile sources
- Significant further emission reductions beyond this will be needed to reach new forthcoming annual PM2.5 standard
- Becoming more critical to achieve emission reductions from federal sources to achieve federal health-based standards





**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

**Thank You!**

