

Update on Valley Air Quality Efforts

AAPCA 2024 Fall Meeting

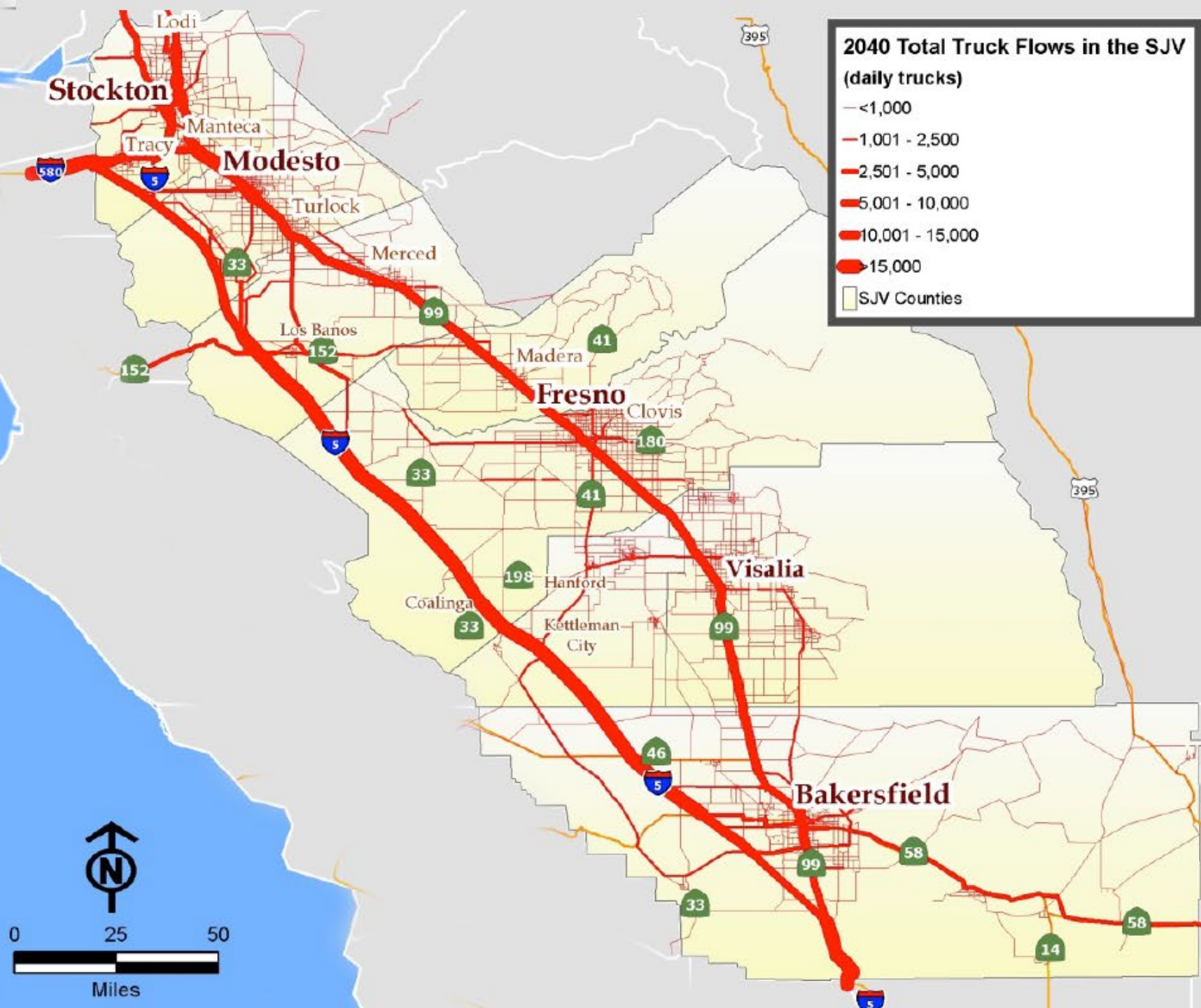
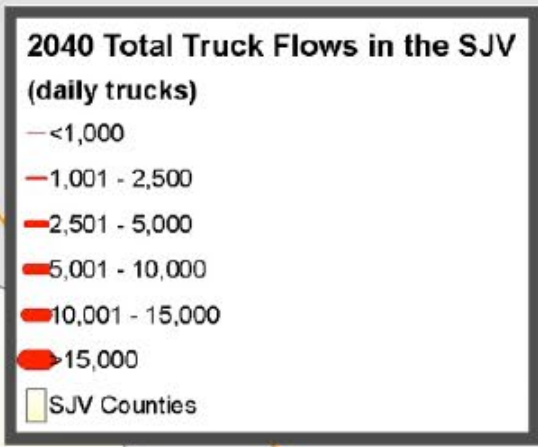
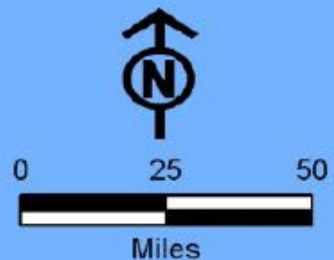
August 28-30, 2024

Emily Kneeland, Director of Air Quality Planning
San Joaquin Valley Air Pollution Control District



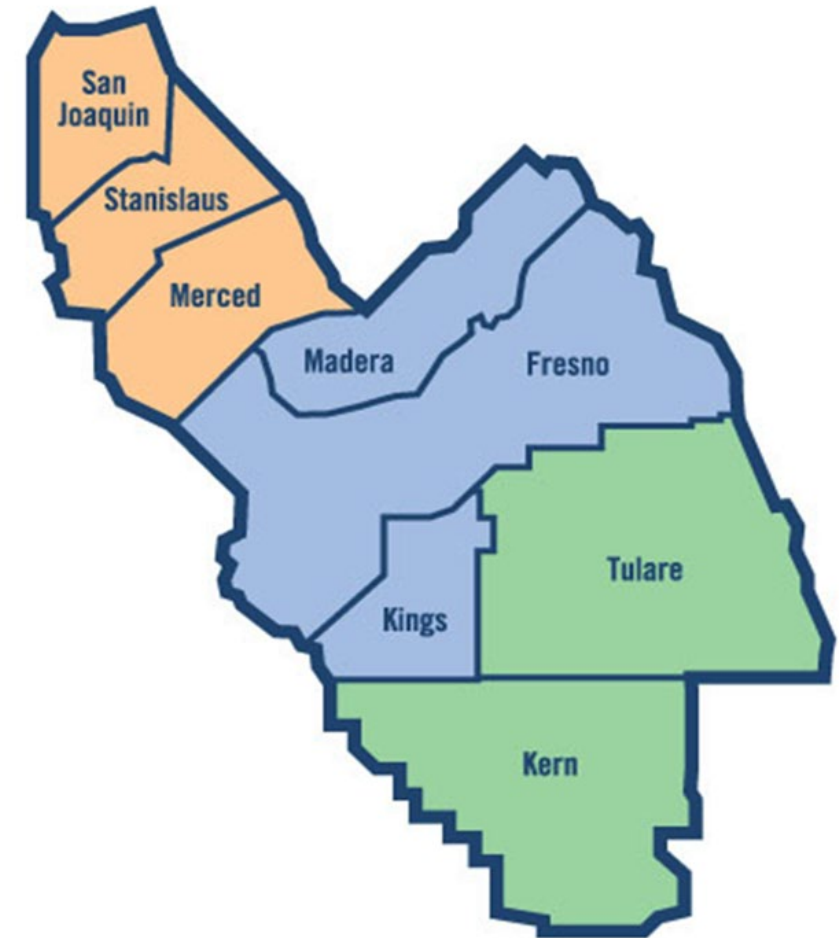
SAN JOAQUIN VALLEY
Unparalleled air quality challenge

Valley serves as
key **GOODS**
MOVEMENT
CORRIDOR



Valley Air District

- Regional agency responsible for air quality
- 15 member Governing Board (8 Supervisors, 5 Councilmembers, 2 Governor appointees)
- Provides local point of contact and service for Valley residents, businesses, public agencies
 - Small business assistance/permits
 - Control emissions from “stationary sources”
 - Provide grant funding (\$575 million in FY 24/25)
 - Address air quality concerns/complaints
- CARB (State) and EPA (Federal) have jurisdiction over “mobile sources” that make up majority of Valley’s air pollution



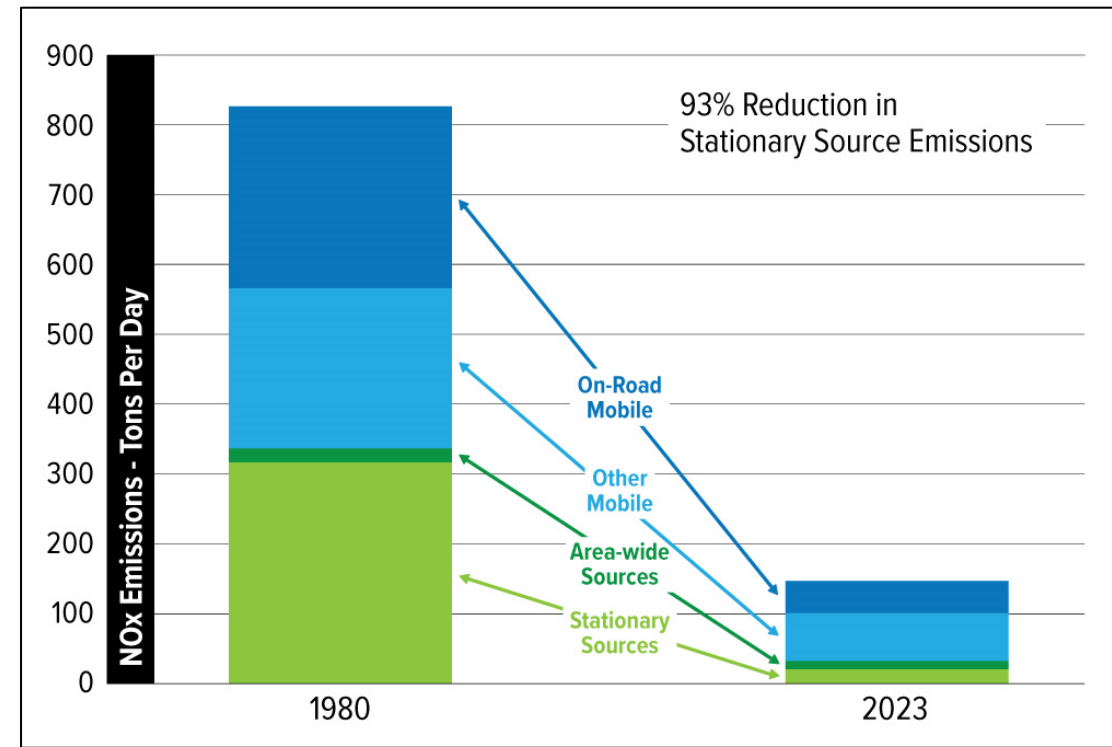
Sources of Air Pollution

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



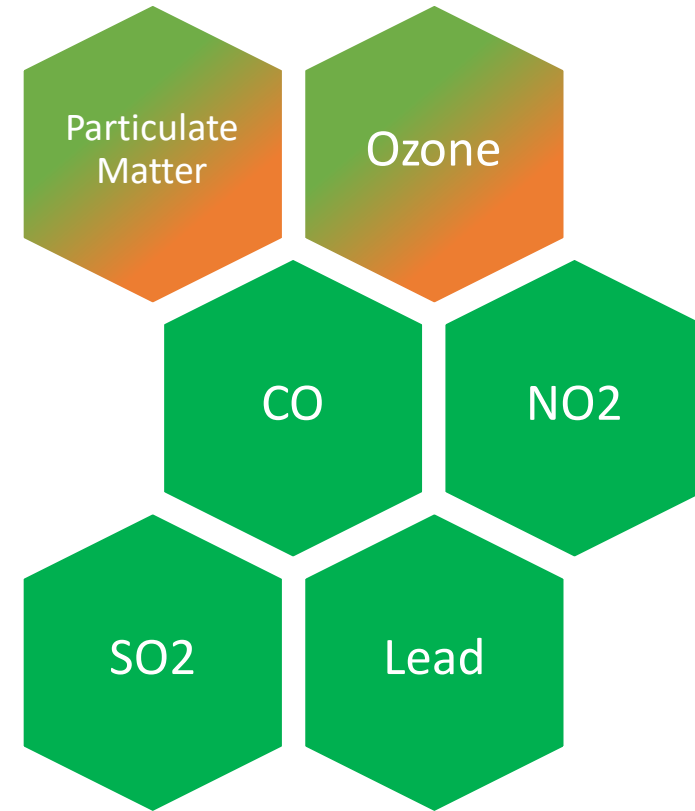
Adopted Controls Are Improving Air Quality

- 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 control measures
- District/CARB combined efforts represent nation's toughest emissions control program
- Strong incentive programs (\$6.5 billion in public/private investment)
- Through significant clean air investments, Valley continues to make major improvements with respect to air quality
- While significant improvements have been made, more reductions needed



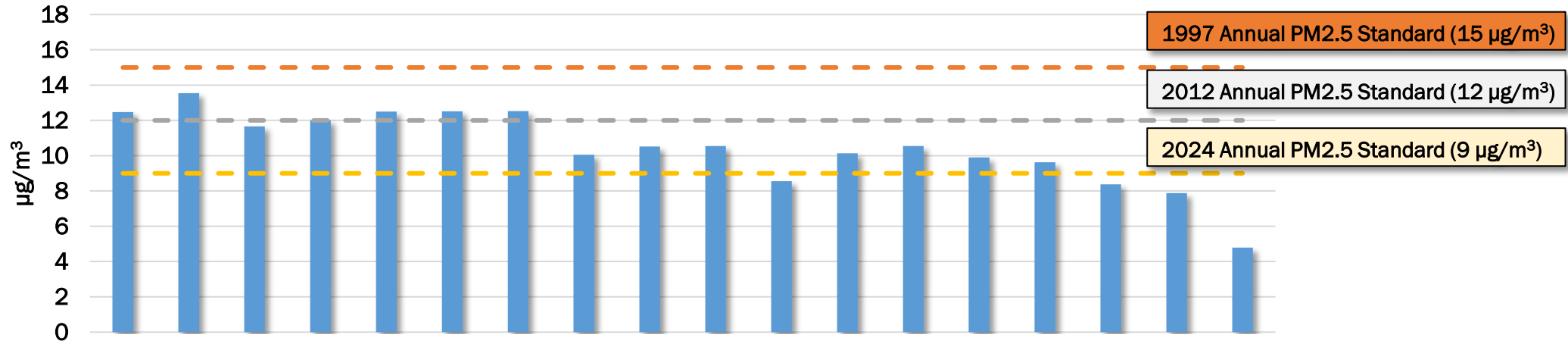
Valley's Attainment Status and Maintenance Plans

- Valley has attained federal air quality standards for multiple criteria air pollutants:
 - 1-hour CO and 8-hour CO standards
 - 1-hour NO₂ and annual NO₂ standards
 - SO₂ standard
 - Lead standard
 - 1-hour ozone standard
 - Daily PM₁₀ standard
 - 65 microgram 24-hour PM_{2.5} standard
 - 15 microgram annual PM_{2.5} standard (well below standard in 2023, likely in attainment in 2024)
 - Evaluating potential attainment of 84 ppb 8-hour ozone standard
- Continuing to prepare maintenance plans as standards are met
- Continuing to work towards attainment of most recent ozone and PM_{2.5} standards under Clean Air Act timeframes

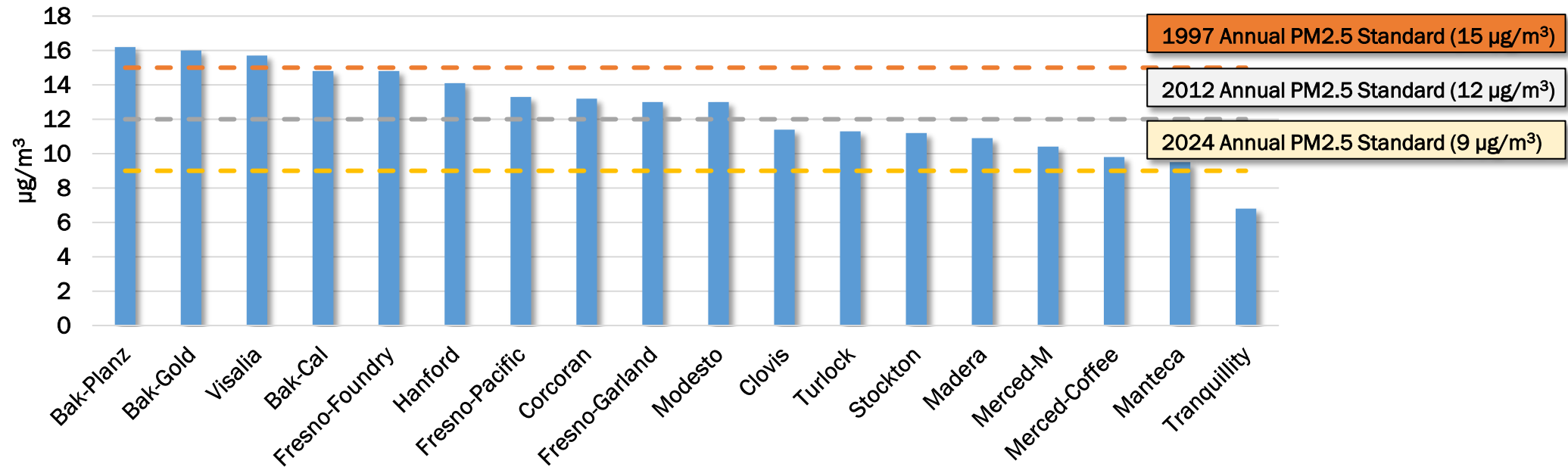


Progress Toward Meeting PM2.5 Standards

2023 PM2.5 Annual Average by Site

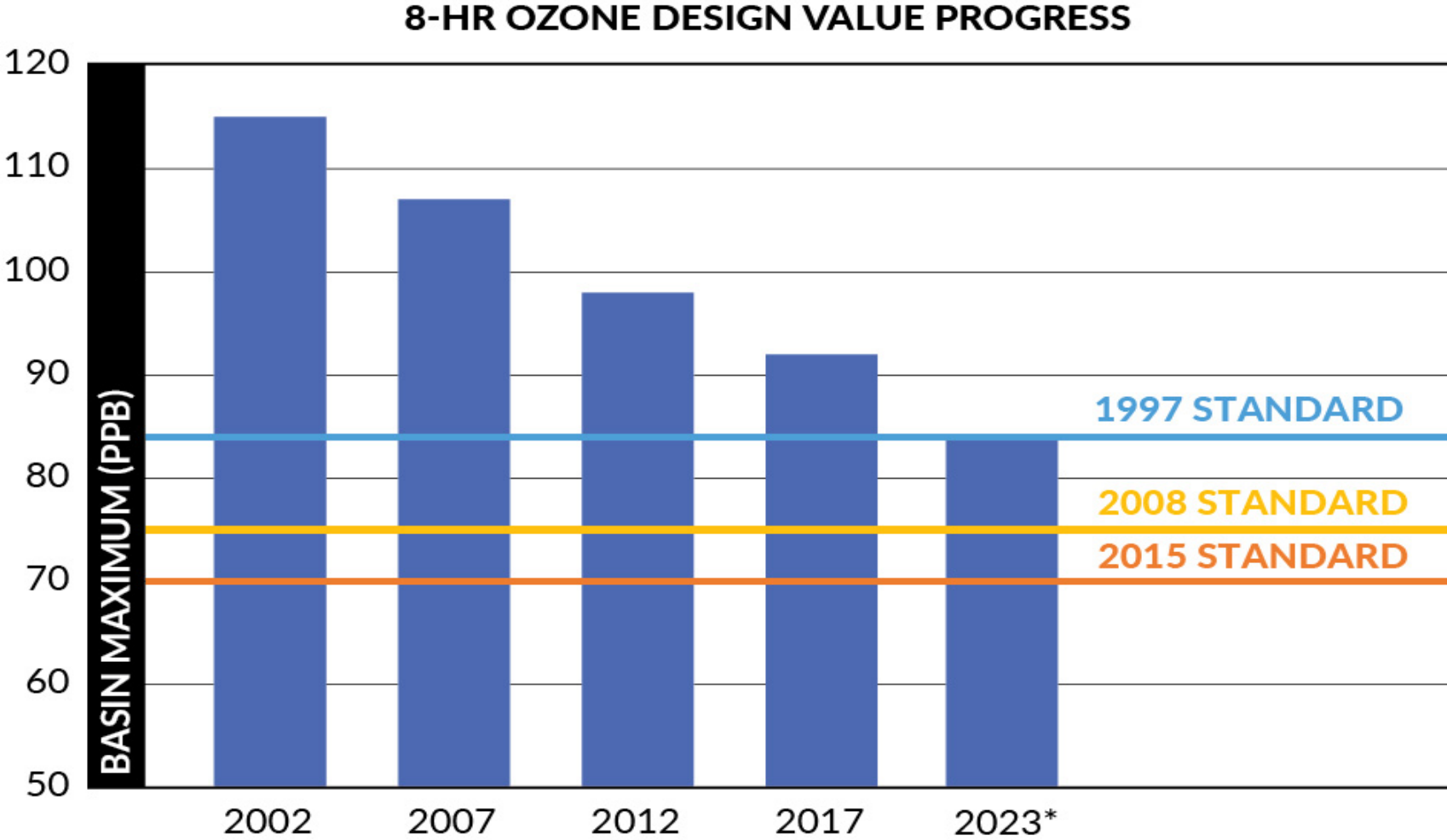


2021-23 PM2.5 Design Value by Site



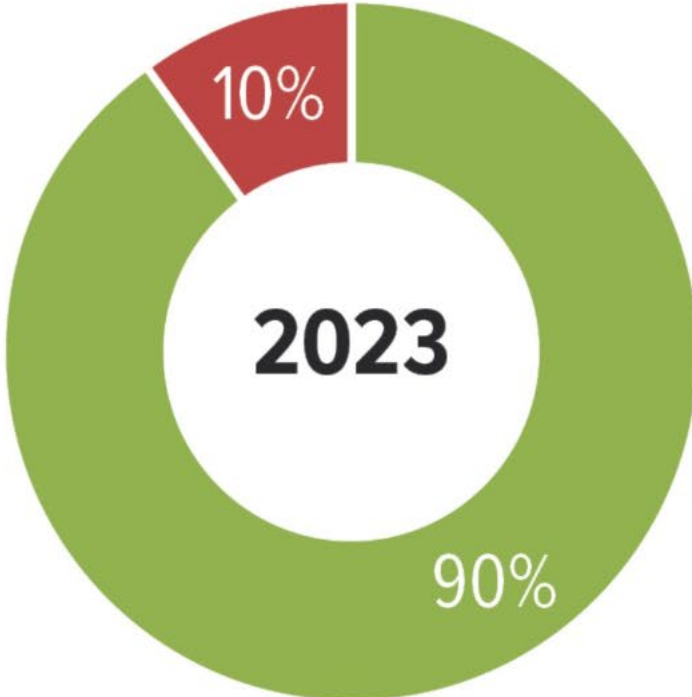
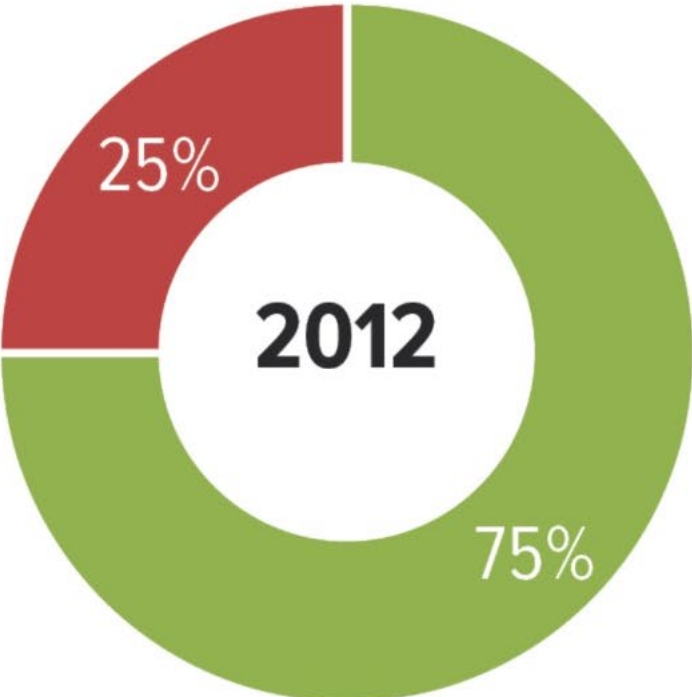
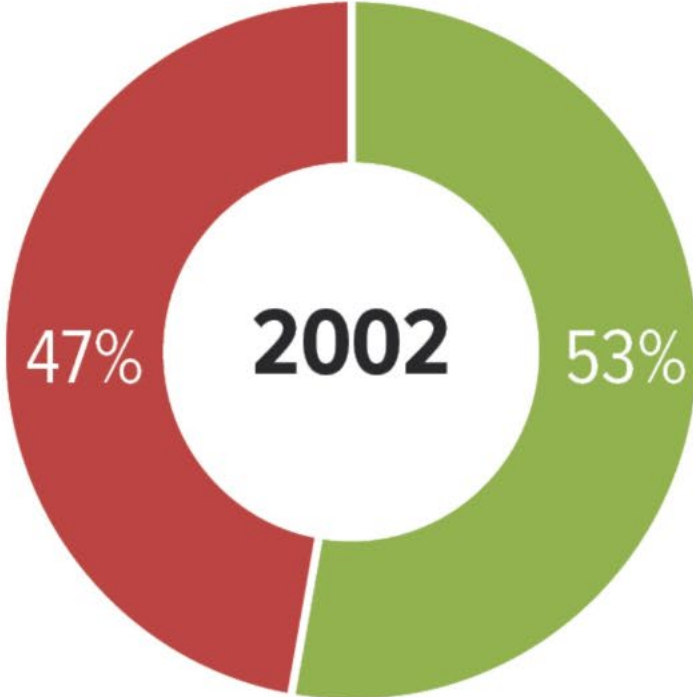
Includes significant PM2.5 impacts from wildfire "exceptional events"

Progress Toward Meeting Ozone Standards



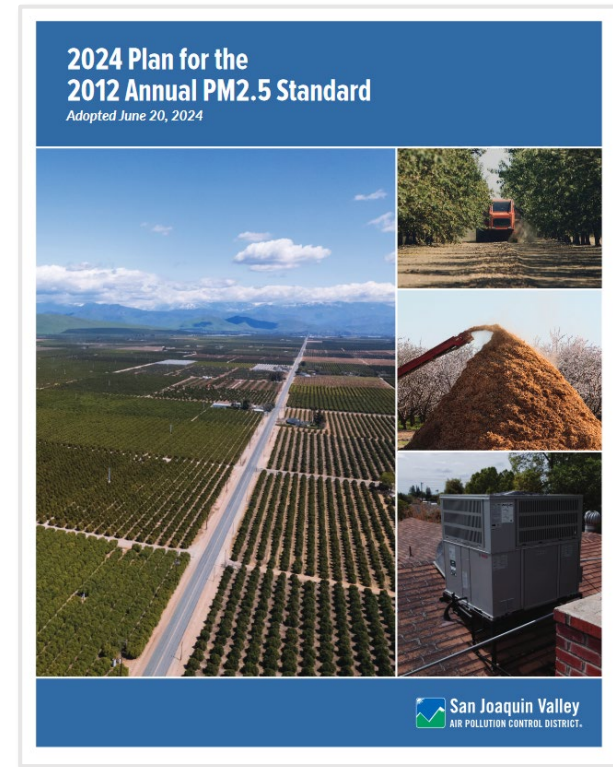
San Joaquin Valley Air Quality Progress

DAYS MEETING vs **DAYS EXCEEDING** THE HEALTH STANDARDS YEAR-ROUND



2024 PM2.5 Plan

- 2024 PM2.5 Plan developed with CARB to address Clean Air Act requirements for 2012 annual PM2.5 standard (12 $\mu\text{g}/\text{m}^3$)
 - Builds upon decades of implementing effective control measures
 - Extensive science and research, state of art modeling, and best available information
 - Plan developed through extensive public process
- Includes new regulatory and incentive-based measures
 - Numerous stationary source measures achieving reductions in near term
 - Commitments for evaluating and implementing additional emission reductions through 2030
 - Provides for expeditious attainment by 2030, reduces NOx emissions by 66%, PM2.5 emissions by 16%



District Board
adopted Plan on June
20, 2024

CARB Governing
Board adopted Plan
on July 25, 2024

Next Step: EPA
review/approval of Plan

Recent Regulatory Actions Under Plan Commitments

Measure	Status
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 4401 (Steam-Enhanced Crude Oil Production Wells)	Adopted Jun. 2023
Rule 4409 (Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities)	Adopted Jun. 2023
Rule 4455 (Components at Petroleum Refineries, Gas Liquids, Processing Facilities, and Chemical Plants)	Adopted Jun. 2023
Rule 4623 (Storage of Organic Liquids)	Adopted Jun. 2023
Rule 4624 (Transfer of Organic Liquid)	Adopted Jun. 2023
Rule 4402 (Crude Oil Production Sumps)	Adopted Dec. 2023
Rule 4550 (Conservation Management Practices)	2024 PM2.5 Plan Commitment
Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters)	2024 PM2.5 Plan Commitment

Contingency Measures for PM2.5 and Ozone

Contingency Measure SIP Revision for 1997, 2006, and 2012 PM2.5 Standards

- Adopted by District Governing Board on May 18, 2023, and submitted to EPA on Jun. 8, 2023
- EPA proposed approval and deferred sanctions on Dec. 20, 2023
- Under consent decree, final FIP deadline of Sept. 30, 2024
- Awaiting EPA final action, anticipated soon

Contingency Measure SIP Revision for the 2008 and 2015 8-Hour Ozone Standards

- Adopted by District Governing Board on Apr. 25, 2024 and submitted to EPA on Apr. 29, 2024
- Permit offset sanctions began May 2, 2024; Highway sanctions and FIP deadline of Nov. 2, 2024
- Awaiting EPA proposed action to defer sanctions

Implications of New PM2.5 Standard for the Valley

- 2023 air quality data indicates significant air quality progress
- New standard will be extremely challenging
 - EPA’s analysis includes emission reduction measure scenarios
 - Measures fall short of total reductions needed for Valley to attain
 - No mobile source measures evaluated (only local)
- District will work with CARB/EPA to evaluate extent of challenge, pursue needed research, and potential additional measures
- Ongoing implementation of current District/CARB strategies will assist Valley in making progress and building towards strategy development for new standard

2023 Air Monitoring Data			
Site	15 µg/m ³ Standard	12 µg/m ³ Standard	9 µg/m ³ Standard
Bakersfield-Golden	13.5	13.5	13.5
Fresno-Pacific	12.5	12.5	12.5
Fresno-Foundry	12.5	12.5	12.5
Hanford	12.5	12.5	12.5
Bakersfield-Planz	12.5	12.5	12.5
Bakersfield-California	12.0	12.0	12.0
Visalia	11.7	11.7	11.7
Stockton	10.6	10.6	10.6
Modesto	10.5	10.5	10.5
Fresno-Garland	10.5	10.5	10.5
Turlock	10.1	10.1	10.1
Corcoran	10.1	10.1	10.1
Madera-City	9.9	9.9	9.9
Merced-M St.	9.6	9.6	9.6
Clovis	8.6	8.6	8.6
Merced-Coffee	8.4	8.4	8.4
Manteca	7.9	7.9	7.9
Tranquillity	4.8	4.8	4.8

Call for Federal Action

- Recently adopted *2024 PM2.5 Plan* does not include any measures from EPA for federally-regulated mobile source emissions
- Imperative that emissions are reduced from mobile sources that fall exclusively under federal jurisdiction (interstate heavy-duty trucks, locomotives, other mobile sources)
- District continues to advocate for state and federal action, as well as pursue additional funding opportunities in order to achieve emission reductions from mobile sources (attainment of new PM2.5 standard not feasible without support from the federal government)



Contact and Resources



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to sign up for the District's email listservs

