

**Public Workshop for
Contingency Measure State Implementation Plan Update
District Rule 4901 (Wood Burning Fireplaces and Wood
Burning Heaters)
District Rule 8051 (Open Areas)**

April 14, 2023

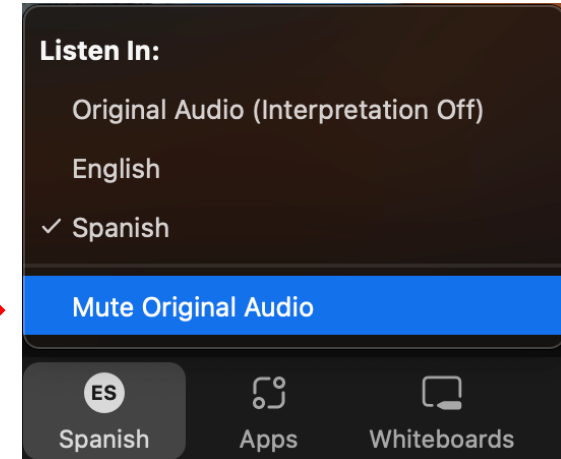
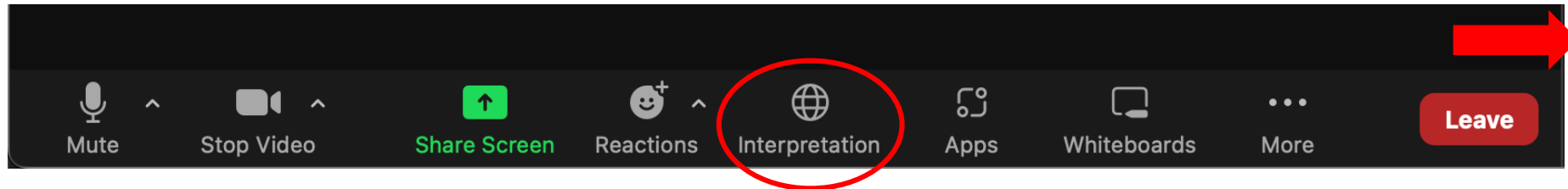
webcast@valleyair.org

How to Listen to the Webinar in Spanish

Cómo Escuchar la Interpretación Español

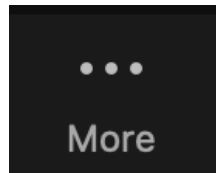
En Una Computadora

1. En los controles de la reunión o el seminario web, seleccione el **icono de interpretación**, que parece a un mundo en la parte debajo de la pantalla.
2. Seleccione español y silencie el audio original.



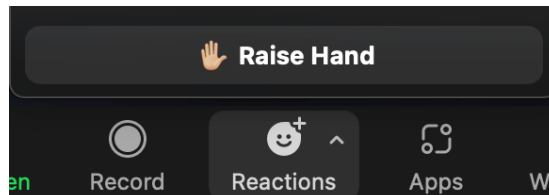
En Un Teléfono o Tableta

1. Seleccione los tres puntos para ver más opciones, seleccione interpretación y siga las mismas instrucciones de arriba.



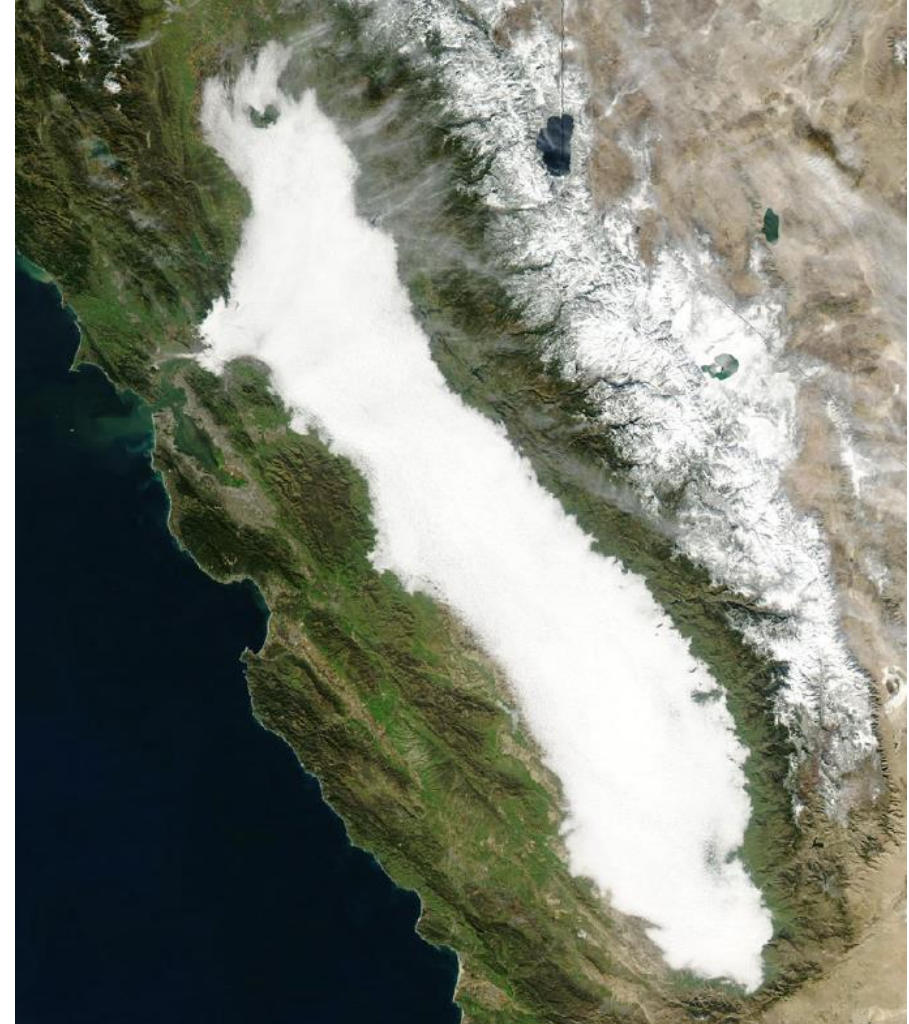
Para Hacer una Pregunta o un Comentario

1. Seleccione el icono de reacciones para levantar su mano



Valley's Air Quality Challenges

- Valley's challenges in meeting federal air quality standards unmatched due to unique combination of topography and meteorology
- Valley designated as “Extreme” non-attainment of the 8-hour Ozone National Ambient Air Quality Standards; “Serious” non-attainment of federal standards for fine particulate matter (PM_{2.5})
 - Substantial emission reductions needed to achieve federal standards
- Need to go beyond already strict control limits
 - Stringent measures have already been implemented and Valley needs further emission reductions to attain federal standards



What is PM2.5?

Particles with a diameter of 2.5 microns and smaller

A mixture of solid particles and liquid droplets in the air

Emitted directly or formed indirectly through chemical reactions between gases

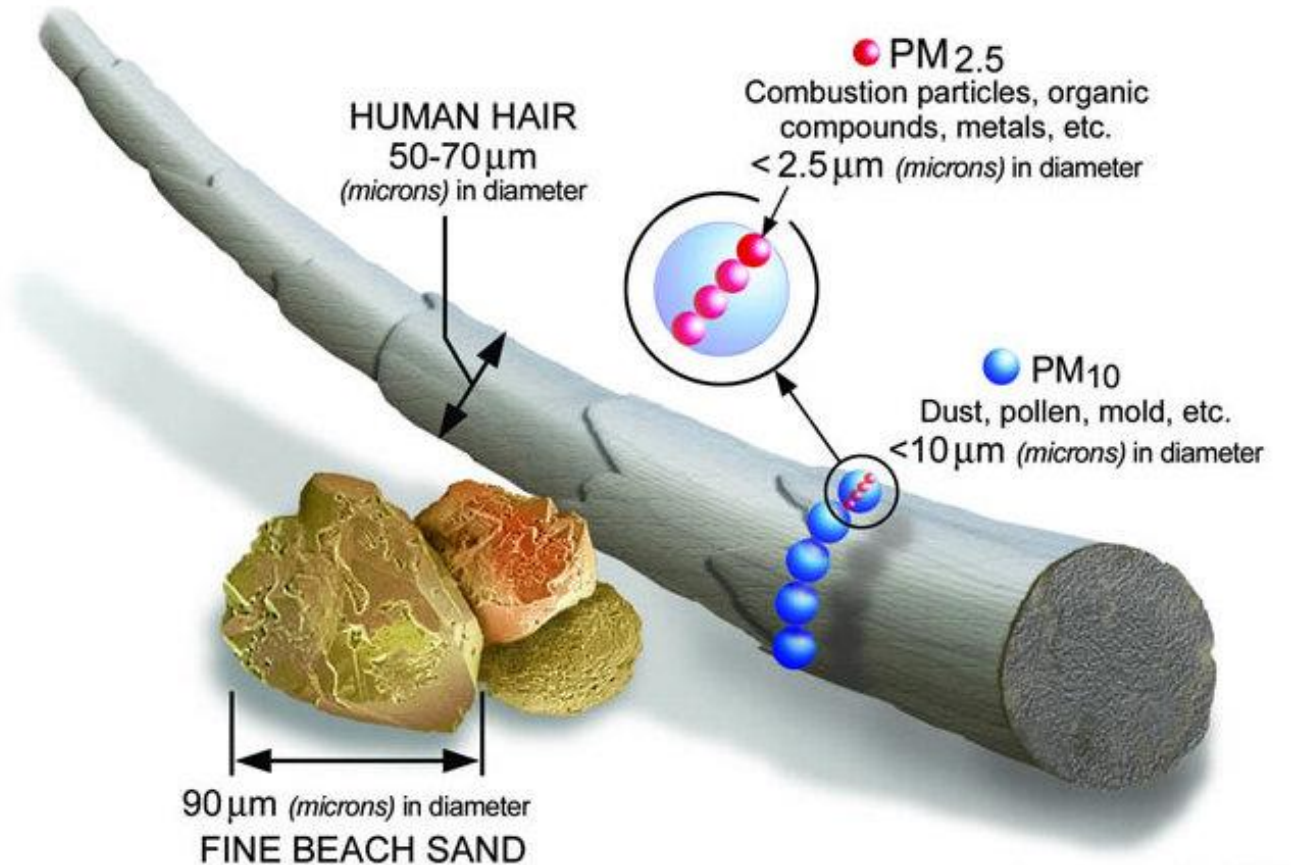
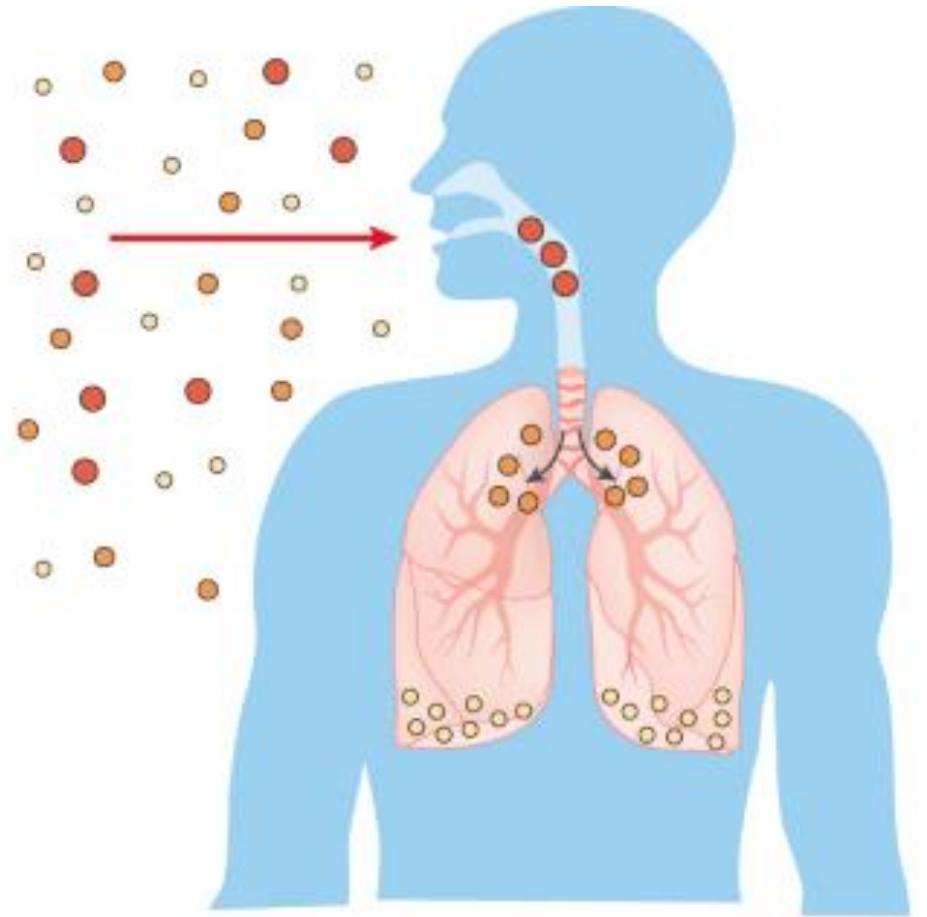


Image courtesy of the U.S. EPA

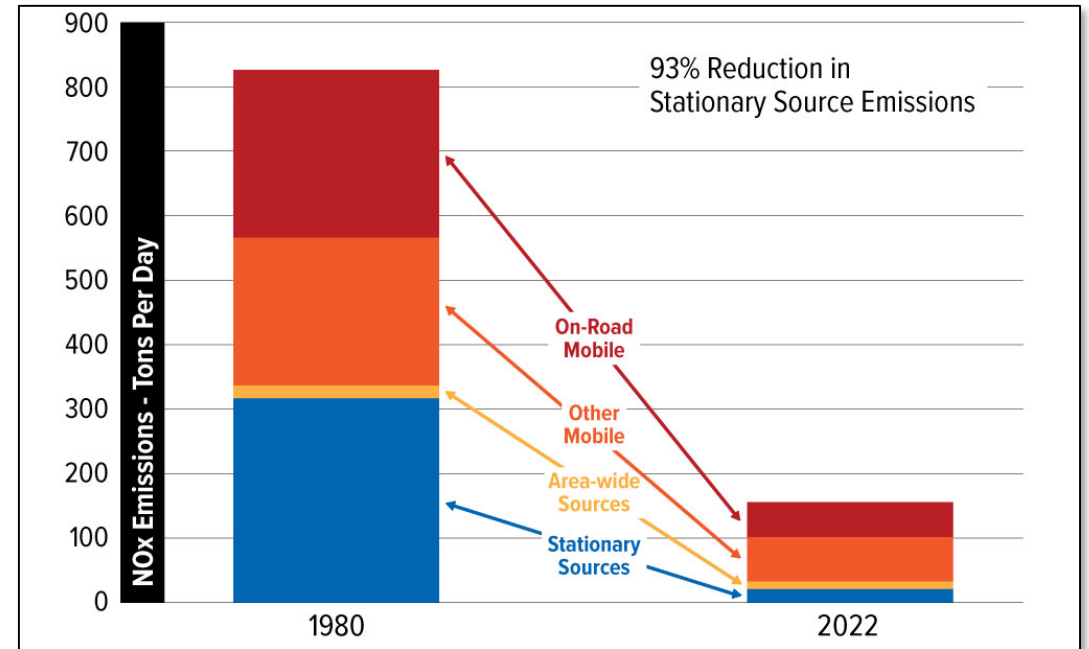
Health Effects of PM2.5

- Premature death in people with heart or lung disease
- Aggravated asthma
- Increased respiratory symptoms – irritation of the airways, coughing, difficulty breathing
- Decreased lung function in children
- Irregular heartbeat and nonfatal heart attacks
- Increased respiratory and cardiovascular hospitalizations
- Chronic bronchitis
- Lung cancer

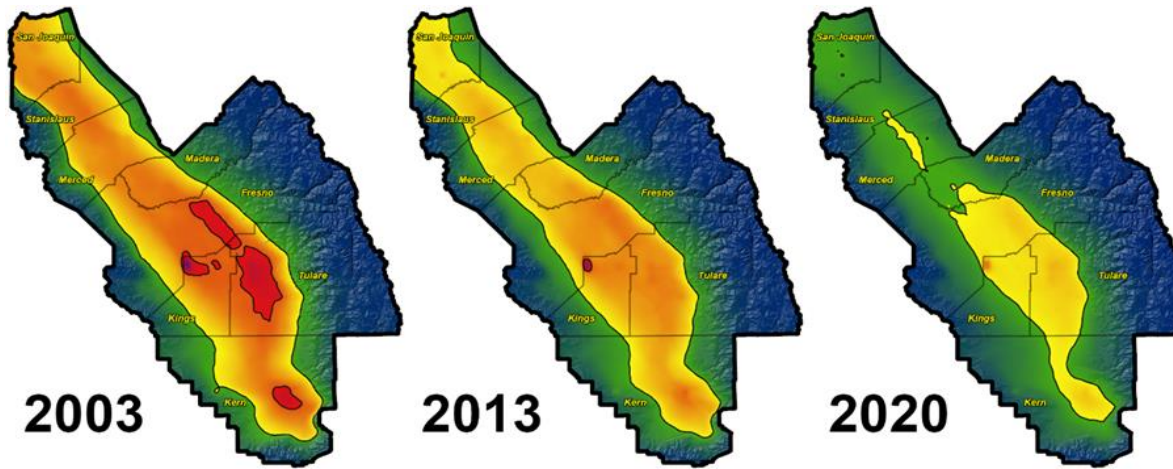


Adopted Controls Are Improving Air Quality

- 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
- California Air Resources Board (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



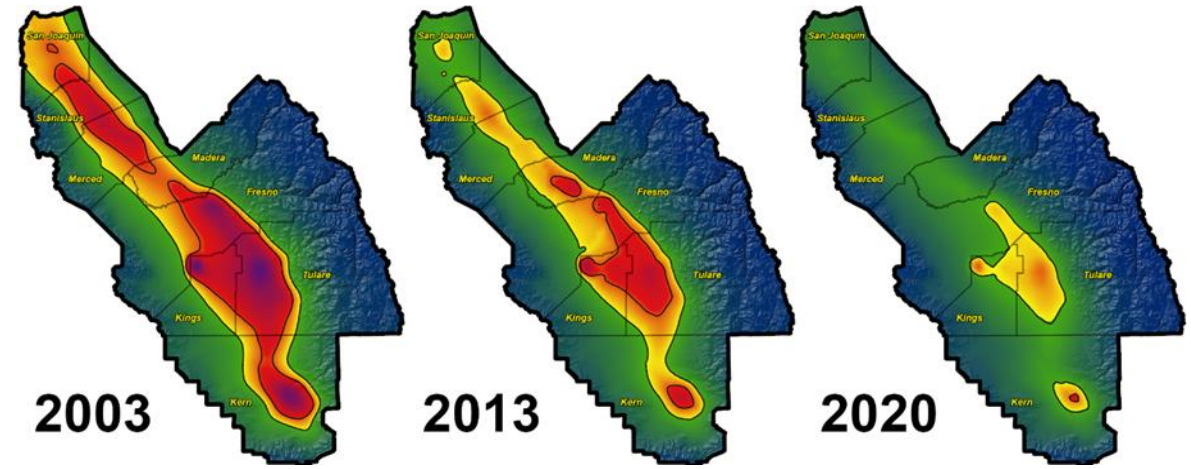
Progress in Improving Valley PM2.5



24-hour Average Design Value ($\mu\text{g}/\text{m}^3$)



Attainment of 2006 and 1997 Standards Attainment of 1997 Standard Only Not in Attainment of Either Standard



Annual Average Design Value ($\mu\text{g}/\text{m}^3$)



Attainment of 2012 and 1997 Standards Attainment of 1997 Standard Only Not in Attainment of Either Standard

Ongoing PM2.5 Planning Efforts

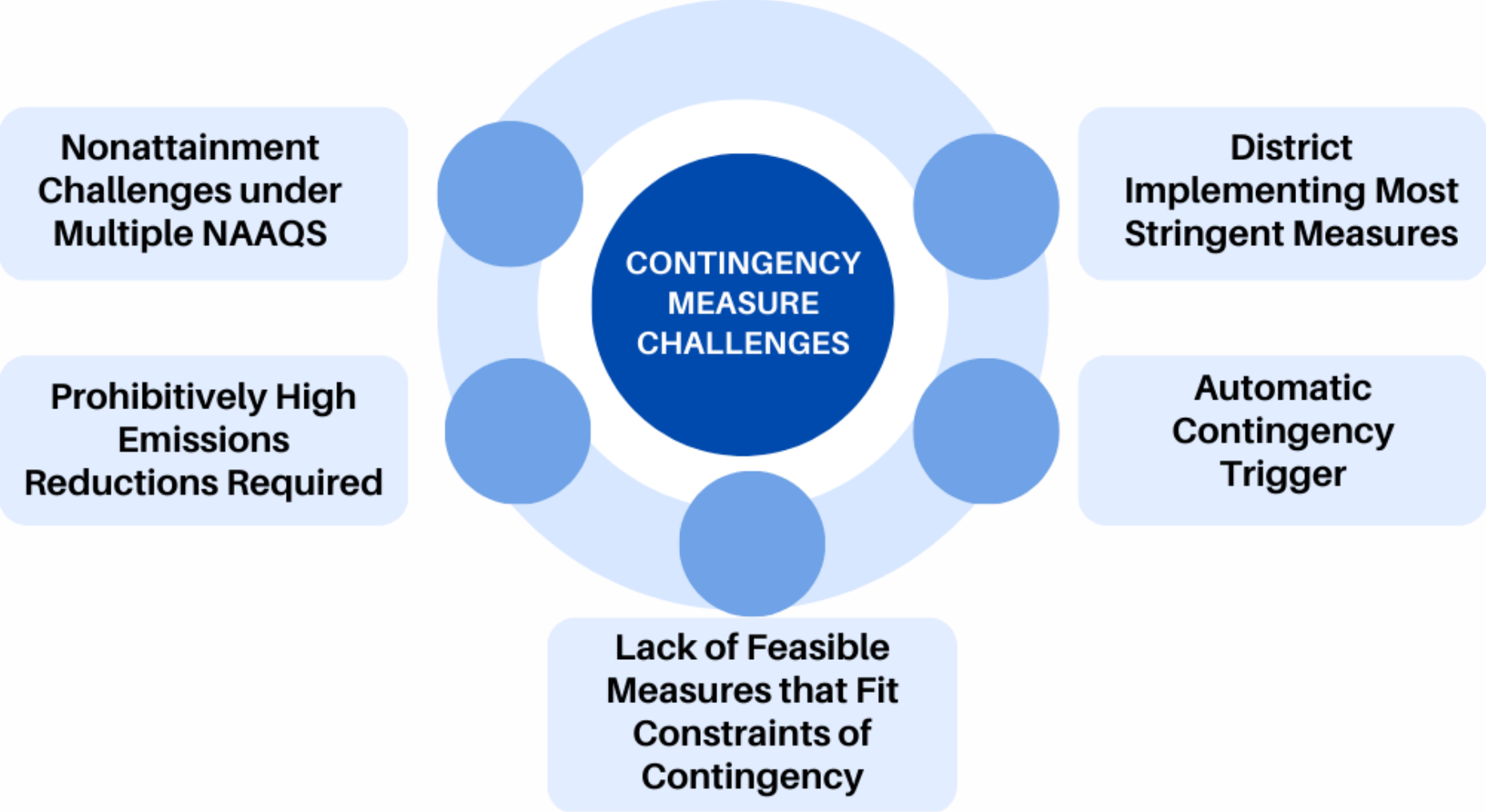
- *2018 PM2.5 Plan* adopted by District/CARB to demonstrate attainment of the 1997, 2006, and 2012 PM2.5 standards
 - Plan includes stringent stationary and mobile source control measures, as well as incentive-based control measures to accelerate deployment of new clean vehicles, equipment, and technologies across a variety of sectors
 - Plan revision to address 1997 PM2.5 standard submitted to Environmental Protection Agency (EPA) in October 2021
- *2018 PM2.5 Plan* addressed contingency measure requirements through Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters)
 - Disapproved by EPA in November 2021
 - District/CARB required to submit revised contingency measures for PM2.5 standards
 - Purpose of workshop is to discuss contingency strategy development by District/CARB

Timely EPA Action Needed

EPA disapproval or inaction can result in devastating consequences to Valley

- Contingency Measures for PM2.5 Standards: District/CARB working to address evolving requirements – EPA contingency guidance just released (3/17/23)
- 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



Draft EPA Contingency Guidance

- On March 17, 2023, EPA published draft guidance on contingency, which included the following main components:

	Draft EPA Guidance
Amount of Emissions Reductions Needed	<p>One Year's Worth of Progress (OYW_p):</p> <ul style="list-style-type: none">• Calculation based on attainment year rather than the base year• If contingency measure(s) achieve less than OYW_p, areas may demonstrate that they have considered all existing and potential measures and have concluded they are technologically or economically infeasible (infeasibility justification)
Time Period for Reductions	Measures must be triggered and implemented within 60 days, and reductions must be achieved within a year of the contingency trigger, or up to 2 years with additional justification
Additional Considerations	Contingency measure responsibilities solely on states and local regions (federal EPA not obligated to conduct analysis or contribute measures with respect to federal mobile sources)

District Evaluation of Contingency Opportunities

District attainment plans include thorough control measure evaluations and potential emission reduction opportunities

2022 Ozone Plan included comprehensive evaluation of NOx and VOC rules

2018 PM2.5 Plan control measure analysis focused on PM2.5 and NOx rules, approved as Most Stringent Measures by EPA in July 2020 – upheld by Ninth Circuit Court of Appeals in April 2022

Recent final EPA interstate transport FIP (March 2023) includes emission limits less stringent than current District rules

Based on analysis and evidence, limited opportunities for technologically feasible contingency measures for Valley

Extensive interagency discussions between CARB, District, and EPA on evaluation

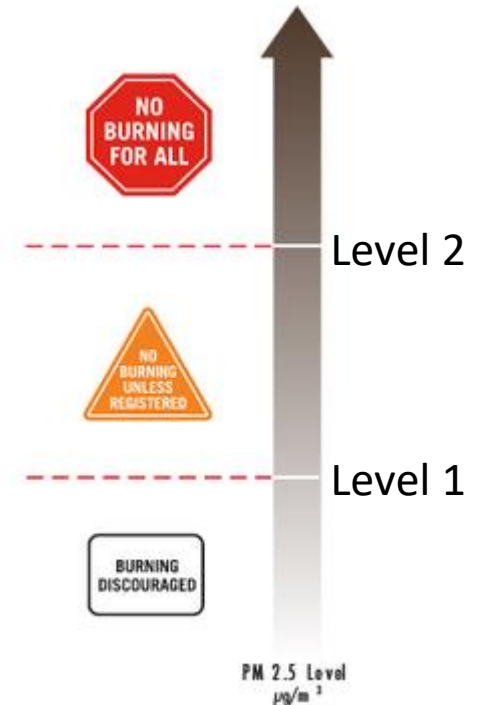
New comprehensive contingency evaluation conducted

Additional District analysis on sources of interest - opportunities may be pursued through upcoming Plan revisions or held in reserve for contingency:

- Residential wood burning
- Dust from rural open areas
- Commercial underfired charbroiling
- Nut harvesting activities
- State and federal mobile sources

Proposed 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)



Proposed 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	12	35	12	35
Contingency Measure 2	11	35	11	35

Hot-spot counties: Madera, Fresno, Kern

Non Hot-spot counties: San Joaquin, Stanislaus, Merced, Kings, Tulare

Proposed Contingency Measures – Open Areas/Fugitive Dust

- District Rule 8051 regulates dust from open areas as follows:
 - Open Area: vacant portions of residential or commercial lots and contiguous parcels that are immediately adjacent to and owned and/or operated by the same individual or entity (not applicable to agricultural sources, subject to conservation management practices)
 - Current Requirement: For urban open areas greater than 0.5 acres, and rural open areas greater than 3.0 acres, if disturbing 1,000 sq. ft. or greater, must ensure soil stability and visible dust emissions no greater than 20% opacity
- Proposed Contingency Measure: Amend 3 acre rural applicability threshold to 1 acre, 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
- EPA approved less stringent contingency measure for rural open areas in Imperial County in August 2019
 - Only included RFP and quantitative milestone triggers (no attainment trigger)
 - No quantified emission benefit

Ongoing Evaluation

Commercial Under-fired Charbroiling

- District continuing to evaluate feasibility of technologies
- Potential strategy considerations include:
 - Many technologies not demonstrated or available commercially (e.g. fire certification issues)
 - Excessive capital and maintenance costs, feasibility issues (e.g. structural, electrical)
 - Need for new certification program to provide necessary assurances to restaurants (emissions certification, durability, warranty, safety, etc.)

Almond Harvesting

- District has worked closely with USDA-NRCS, CARB, and ag sector to test/demonstrate low-dust harvesting technologies through Conservation Management Practice Program
- District launched new almond harvester incentive program with 2018 PM2.5 Plan, supported by local/state/federal funds
- USDA-NRCS also offers incentive funding for lower-dust harvesting practices
- Potential strategy considerations include:
 - Need for continued research/testing/certification of latest technologies
 - Need for enhanced state and federal funding, including newly available Inflation Reduction Act and other funding

Additional updates and recommendations in coming year

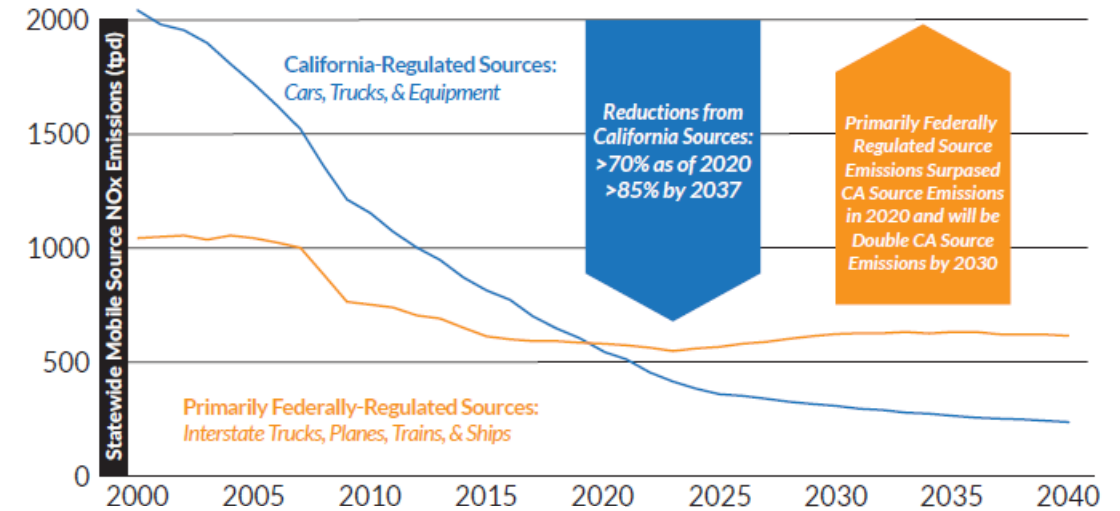
Contingency Analysis

PM2.5 Standard	PM2.5 (tons/day)			NOx (tons/day)				
	OYW _p Approach (A)	Identified Measures (B)	Balance (C: B-A)	OYW _p Approach (D)	Identified Measures (E)	Initial Balance (F: D-E)	PM2.5 Surplus to NOx (6:1 Plan ratio) (G: C*6)	Remaining Balance (w/o mobile source contingency measures) (F-G)
1997 Annual	0.41	0.69	0.28	7.91	0.10	(7.81)	1.68	(6.13)
2006 24-hr	0.52	0.69	0.17	6.66	0.10	(6.56)	1.02	(5.54)
2012 Annual	0.43	0.69	0.26	8.65	0.10	(8.55)	1.56	(6.99)

- Proposed contingency measures conform with draft EPA guidance:
 - All reductions provided by District contingency measures (no mobile source reductions)
 - Significant reductions from District measures, fully satisfy fair-share reductions from sources under District jurisdiction, remaining balance could be addressed by mobile source reductions, particularly federal mobile sources
 - Lack of additional feasible local/state measures that meet contingency requirements

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



CARB Opportunities for Contingency Measures

- Exploring contingency measure options within our authority
- Evaluating all CARB regulations for contingency measures
- Ensuring reductions are beyond what is needed for meeting air quality standards

Challenges

- Mature mobile control programs driving to zero-emissions limits opportunities
- Primarily federally regulated sources are more than half of statewide mobile source emissions
- Extreme areas implement measures for air quality rather than hold them in reserve
- EPA FIP drives timing of contingency measure adoption

CARB Measure Analysis

- CARB has analyzed control measures for all sources under CARB authority including:
 - Light, medium, and heavy-duty vehicles and trucks, airport shuttles, and buses
 - Off-road equipment, fork lifts, lawn and garden, construction and mining, industrial equipment, commercial harbor craft, recreational boats, and ocean-going vessels
 - Port and rail operations, locomotives, space and water heaters

CARB Measure Analysis Factors

- Is the program needed for attainment?
- Can it be triggered and implemented within 60 days and achieve reductions within 1-2 years?
- Is the technology feasible or cost effective in the time frame needed?
- Can it be adopted and approved by EPA within the FIP timeline?

CARB Control Program Categories

- Control measures fall under a few categories:
 - Engine Emissions Standards
 - Fleet Requirements
 - Manufacturer Sales Requirements
 - In-Use Requirements
- Most have zero-emission component

Potential Contingency Options

- Require more stringent engine standards
- Pull forward compliance deadlines for fleet or sales requirements
- Increase percentage sales requirements
- Enhance testing and enforcement
- Episodic controls

Example: Light-Duty Vehicles and Motorcycles

Regulatory Programs	Contingency Options	Trigger Feasibility	Technological Feasibility	Timing for FIP
Advanced Clean Cars Program (I and II), including the Zero Emission Vehicle Regulation	Pulling compliance timelines forward. Setting more stringent standards.	No	No	No
Clean Miles Standard	Pulling forward timeline to achieve 100% eVMT.	No	No	No
On Board Diagnostics II (OBD)	Removing or pulling phase-in timelines forward. Setting more stringent OBD requirements.	No	No	No
California Smog Check Program	Require annual smog check. Require annual smog check for only high mileage vehicles.	No	No	No
Reformulated Gasoline	Require more stringent standards. Change cap limits and refinery limits.	No	No	No
On-Road Motorcycle Regulation	Pulling compliance timelines forward. Require more stringent emissions standards.	No	No	No

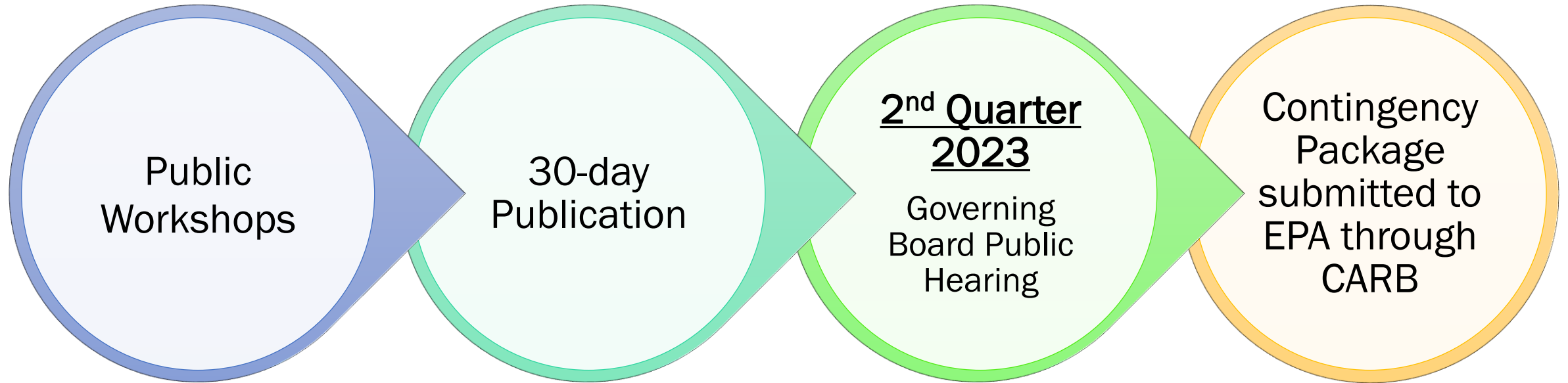
Summary of Findings

- CARB measures must go through regulatory process that takes about five years
- CARB regulations requiring fleet turnover or new engine standards require long lead time
- CARB regulations are technology forcing and some of the most stringent in the country
- Going to zero is needed for attainment and eliminates opportunities for contingency

Next Steps

- CARB will continue to look for opportunities and welcomes suggestions for contingency measures
- CARB will continue to evaluate regulations currently under development for contingency opportunities
- CARB will evaluate implications of new EPA contingency measure guidance
- CARB will work with EPA and the district on developing practical contingency measures

Addressing Contingency Measures – Next Steps



Public participation is encouraged throughout process

Contact

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Listserv: Visit <https://ww2.valleyair.org/about/sign-up/> to sign up for the District's Planning Listservs

Comments/Questions

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