

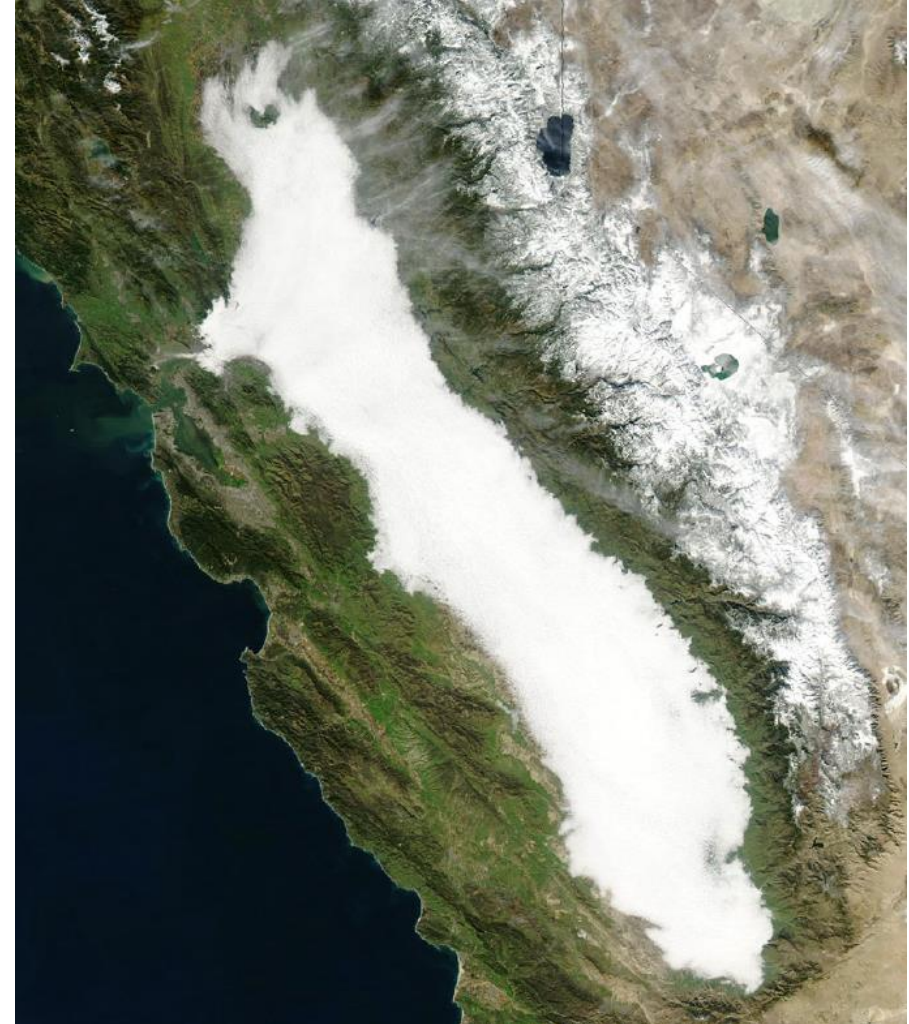
Public Workshop for Contingency Measure State Implementation Plan Update, District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) and Other Potential Rule Amendments

March 22, 2023

webcast@valleyair.org

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

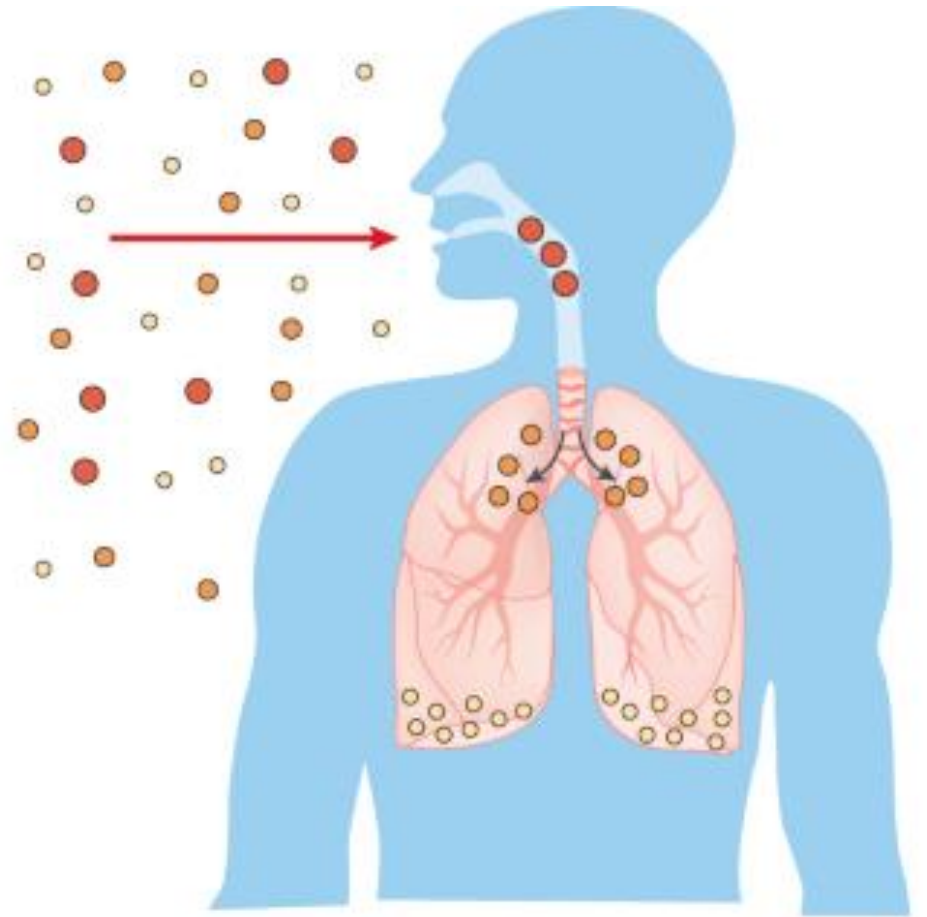
Emitted directly or formed indirectly through chemical reactions between gases



Image courtesy of the U.S. EPA

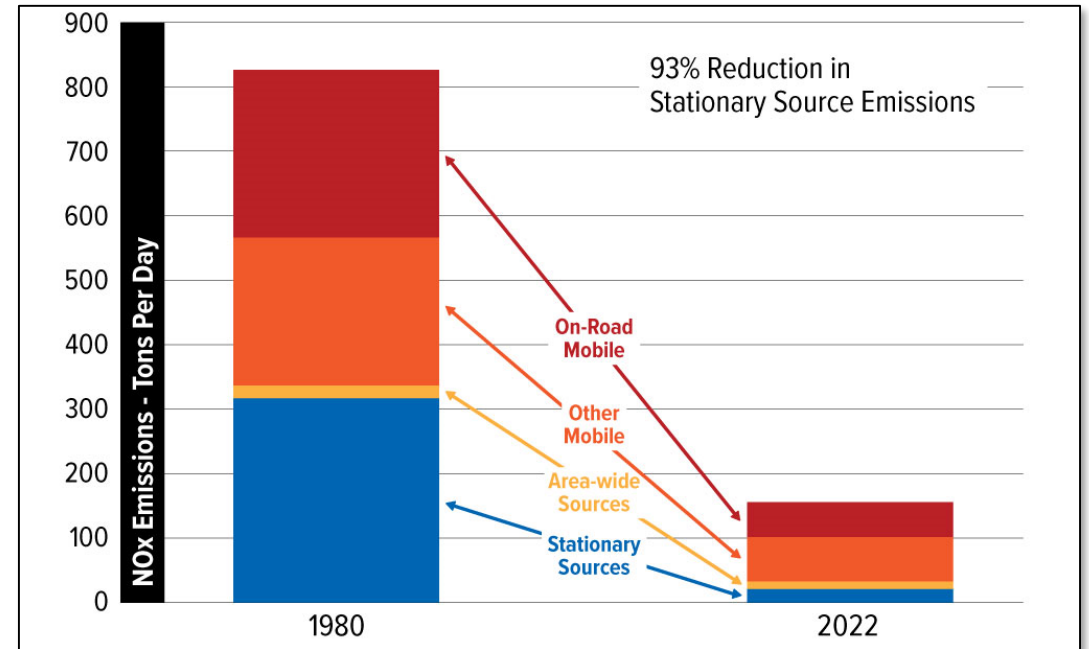
Health Effects of PM2.5

- 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

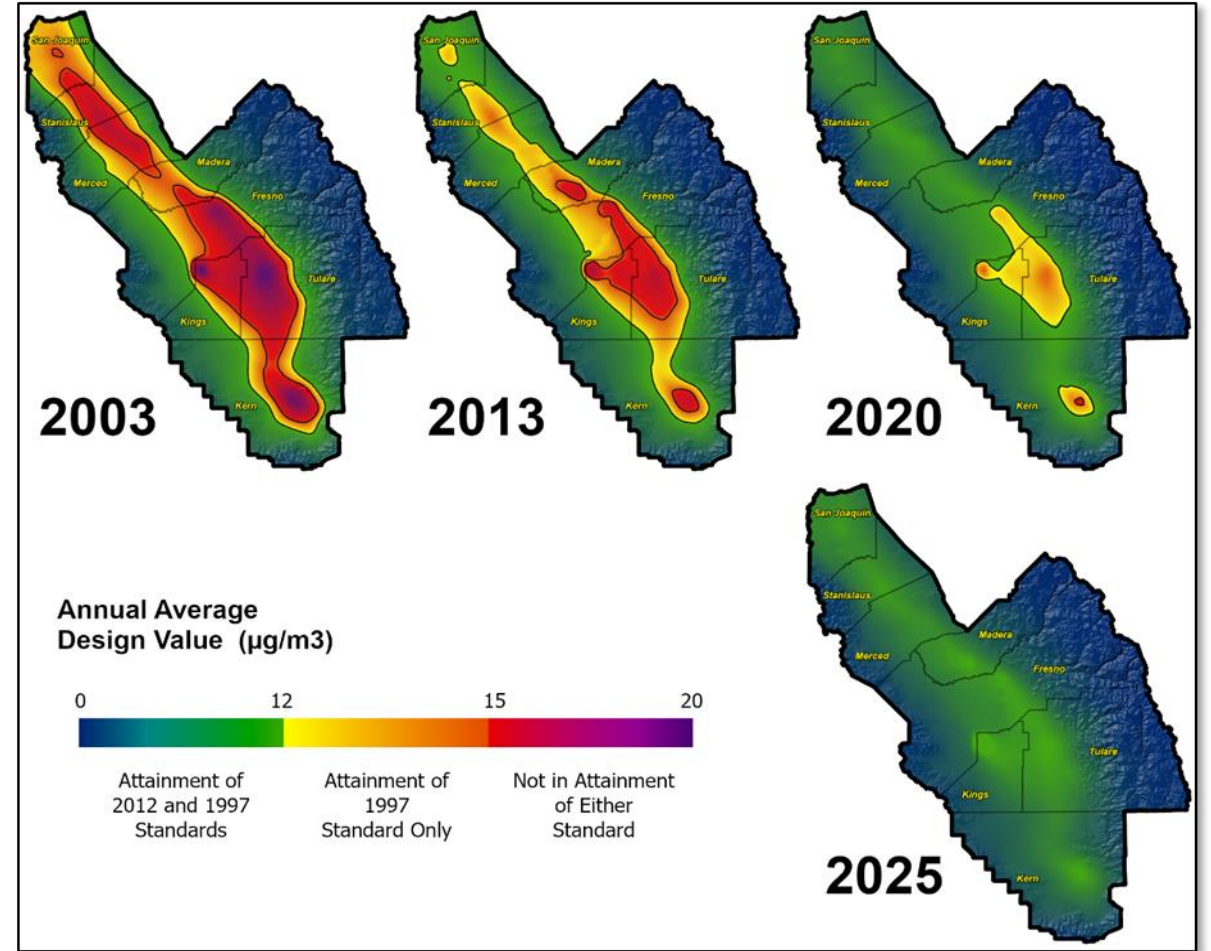
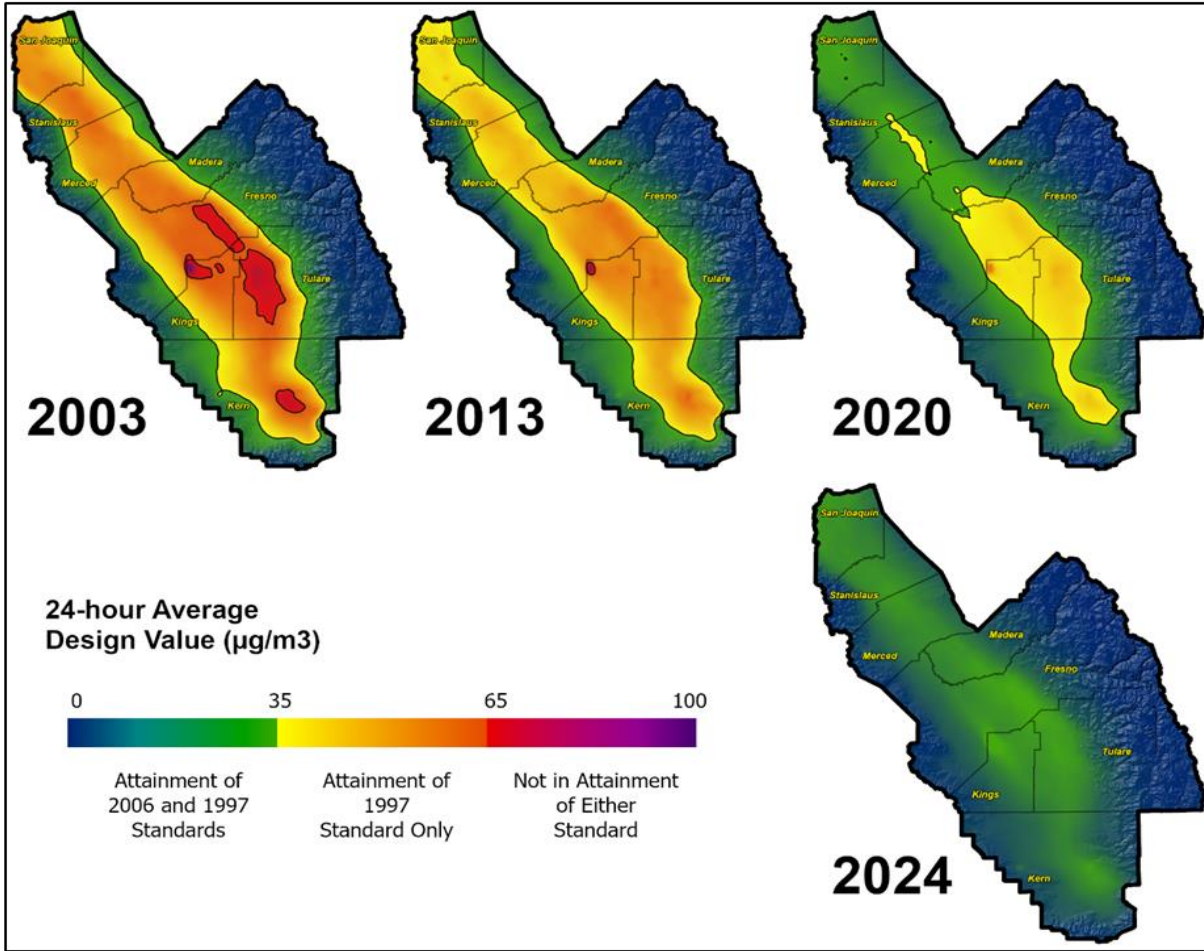


Adopted Controls Are Improving Air Quality

- 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



Ongoing PM2.5 Planning Efforts

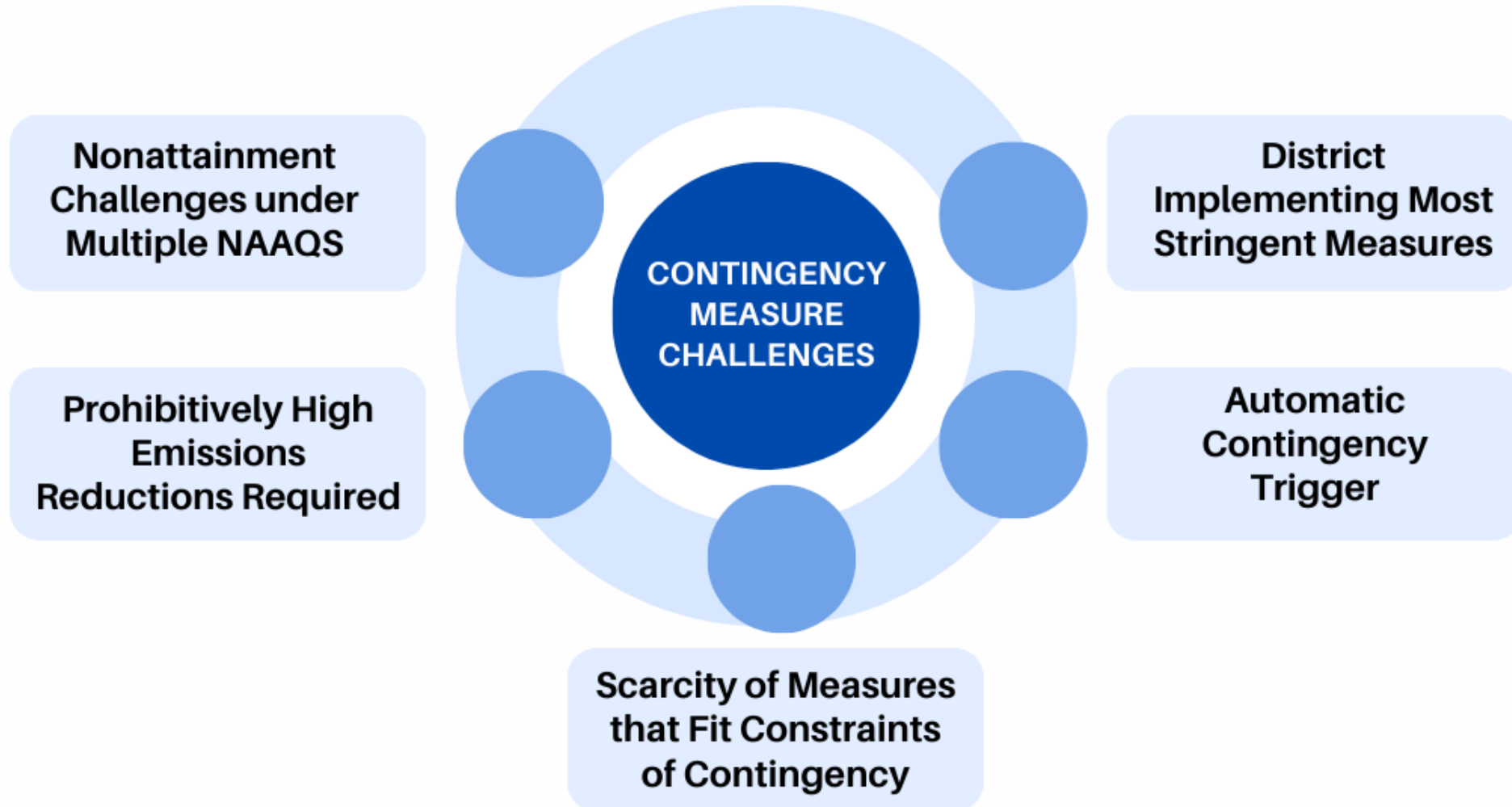
- *2018 PM2.5 Plan* adopted by District/CARB to demonstrate attainment of the 1997, 2006, and 2012 PM2.5 standards
 - Plan includes stringent stationary and mobile source control measures, as well as incentive-based control measures to accelerate deployment of new clean vehicles, equipment, and technologies 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"> Determine avg. annual reductions between base year EI and the projected attainment year EI Determine what percentage of base year EI amount represents Apply percentage to projected attainment year EI to determine amount of reductions needed 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	Reductions to be achieved within a year of the contingency trigger, or up to 2 years with additional justification
Additional Considerations	<ul style="list-style-type: none"> 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 Potential 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

New comprehensive contingency evaluation currently underway

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

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

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

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)

Contingency Concept	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*
- *Estimated emission reductions 0.38 - 0.88 tpd PM2.5 and 0.04 - 0.09 tpd NOx (annual average)*

Potential 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
- Potential Contingency Measure: Amend 3 acre rural applicability threshold to lower level, 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
- Suggested by EPA given contingency measure adopted in Imperial County
 - Only included RFP and quantitative milestone triggers (no attainment trigger)
 - No quantified emission benefit
 - Approved by EPA in August 2019

Ongoing Evaluation

Commercial Under-fired Charbroiling

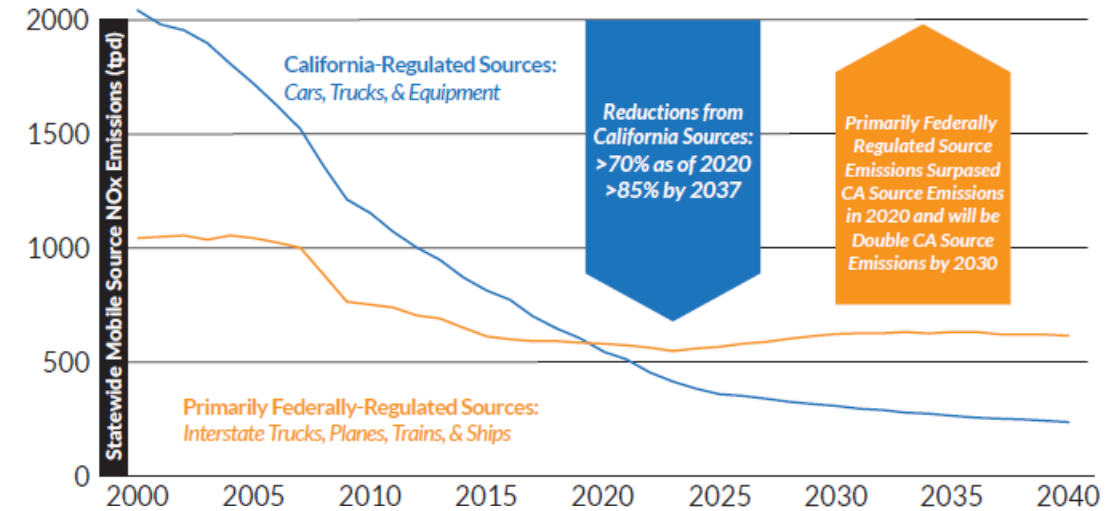
- District continuing to evaluate feasibility of technologies
- Potential strategy considerations include:
 - Many technologies not demonstrated or available commercially; fire certification issues
 - Excessive capital and maintenance costs, feasibility issues (structural, electrical, etc.)
 - Need for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

Almond Harvesting

- District has worked closely with USDA-NRCS, CARB, and agricultural sector to test and demonstrate lower-dust harvesting technologies through Conservation Management Practice Program
- District launched new almond harvester demonstration 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*

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 undergoing analysis of 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 it needed for attainment?
- Can it be triggered and implemented within 60 days and achieve reductions within one year?
- Is the technology feasible or cost effective in the time frame needed?
- Can it be adopted and approved by EPA within the FIP timeline?

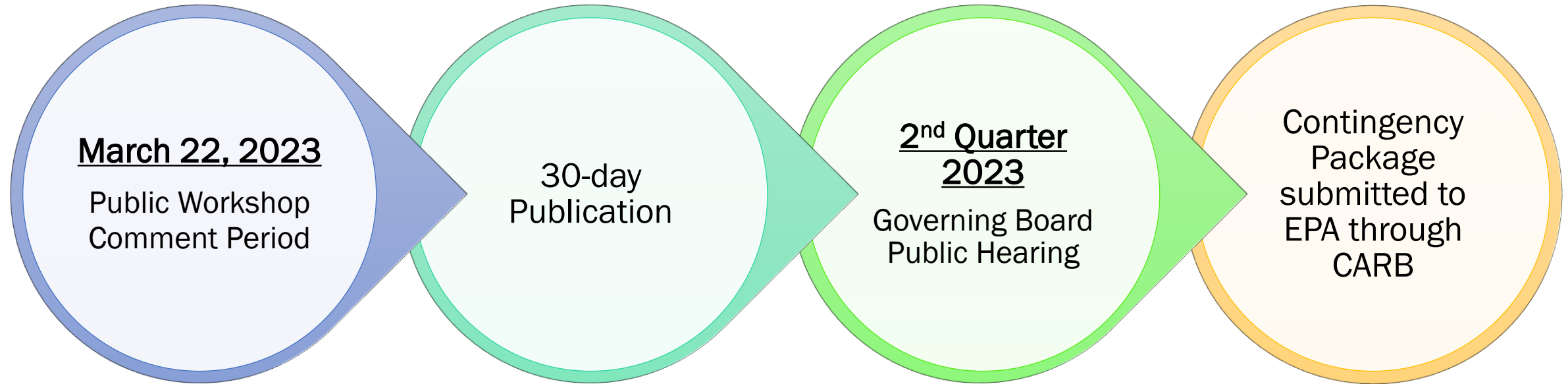
Initial Summary

- 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 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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