

Public Workshop for Potential Amendments to Rule 4905 (Natural Gas-Fired, Fan-Type Central Furnaces)

November 18, 2021

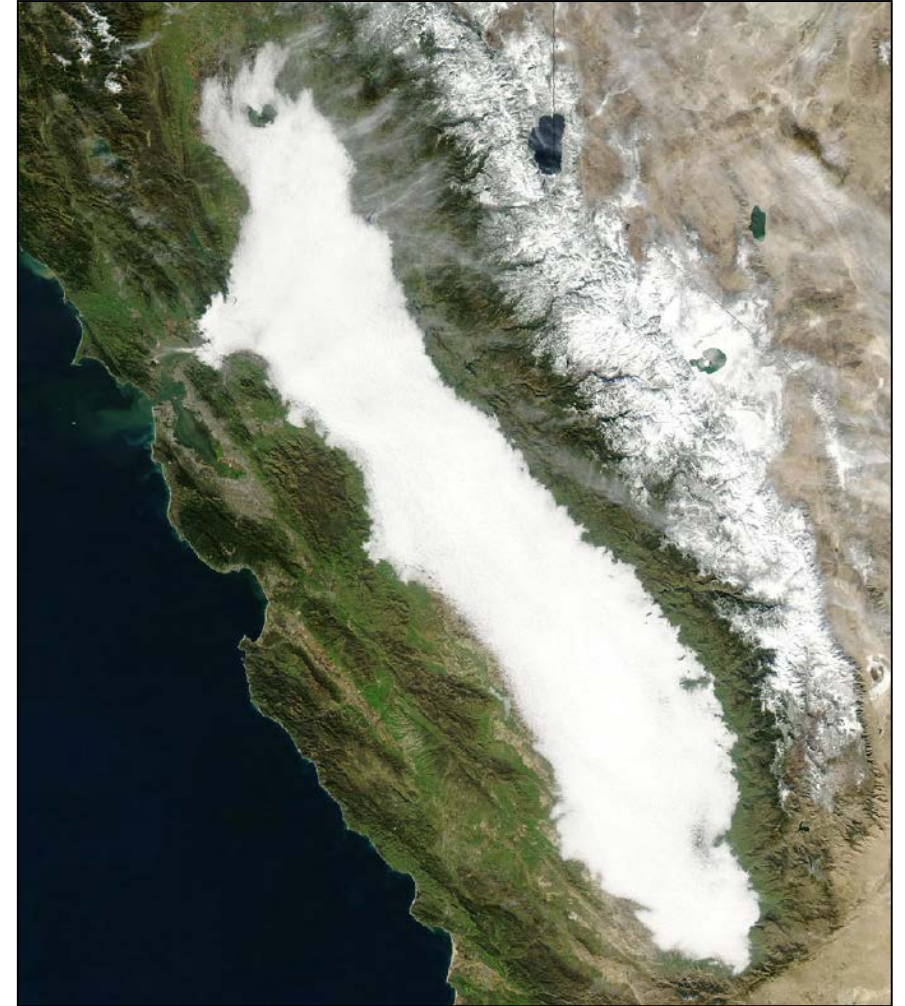
webcast@valleyair.org

San Joaquin Valley's Air Quality Challenges

- Valley's challenges in meeting federal air quality standards unmatched due to unique geography, meteorology, and topography

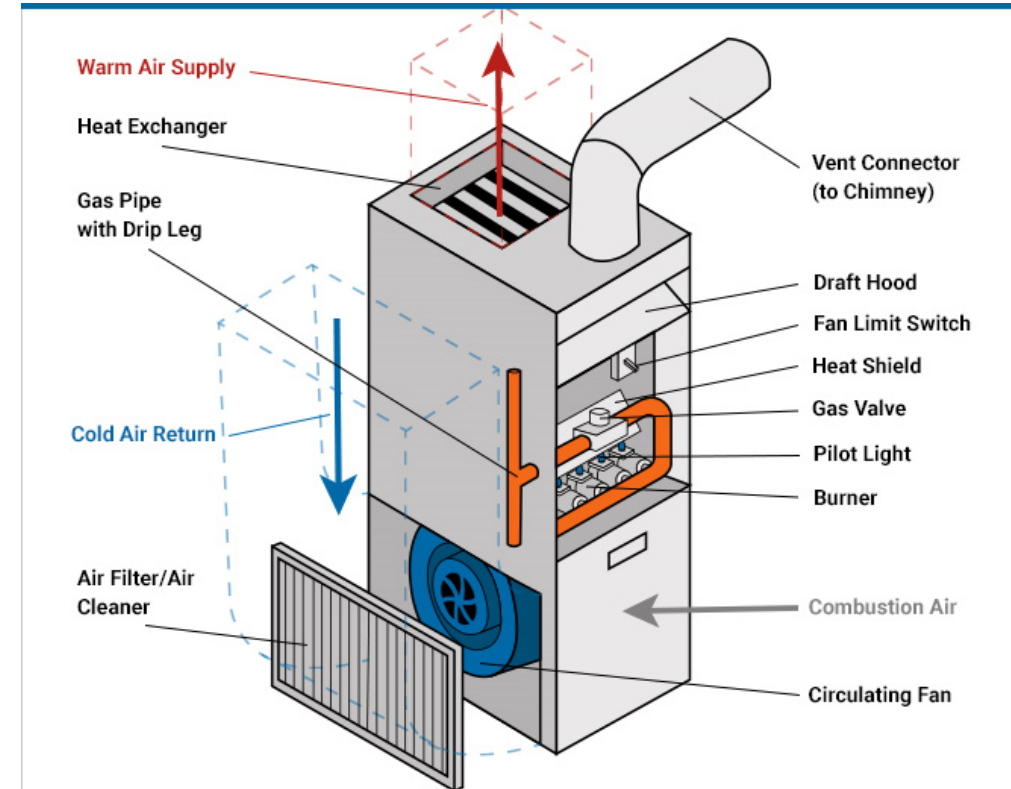
NAAQS	SJV Designation
8-hour Ozone	Extreme
Fine Particulate Matter (PM2.5)	Serious

- Combustion is a significant source of NOx emissions, primary precursor to ozone and PM2.5 formation
 - Majority of NOx emissions from mobile sources
 - NOx reductions are a key part of District's ozone and PM2.5 attainment strategies
 - District Rule 4905 (Natural Gas-Fired, Fan-Type Central Furnaces) established to reduce NOx emissions from furnaces in the Valley



What are Natural Gas-Fired Fan-Type Central Furnaces?

- Natural-gas furnaces are used to provide heat to residential/commercial properties
- Natural-gas fuel is burned to create heat for distribution through the home or commercial building
 - Furnaces create NO_x emissions, which can contribute to ozone and PM formation
- District Rule 4905 requires NO_x emissions limits on furnace units



Rule 4905 Requirements

- Adopted in 2005 and amended several times, Rule 4905 is a point-of-sale rule that limits NO_x emissions from natural gas-fired, fan-type central furnaces
- Due to air quality challenges, in 2014/2015, the District and South Coast AQMD amended respective rules to require more stringent emissions limits of 14 ng/J of NO_x
 - Some manufacturers raised concerns regarding whether technology would be ready by compliance deadlines
 - Due to concerns raised, amendments allowed the sale of non-compliant units during the initial implementation period (36 months) in exchange for the payment of an emissions fee for each non-compliant unit sold
 - Fee amount was set to disincentivize the sale of non-compliant units
 - Necessary to ensure adequate supply for expected demand for new units in Valley
 - Helped minimize unfair competitive disadvantage for manufacturers that provided compliant units in the Valley

Current End Dates for Emissions Fee Options

Emissions Fee Option	
Furnace Category	Fee End Date
Condensing Units	September 30, 2019
Non-condensing Units	September 30, 2019
Weatherized Units	September 30, 2021
Manufactured Homes Units	September 30, 2021

- Emissions fee period has ended for all size and unit types
- Manufacturers have been successful in developing furnace technologies that meet 14 ng/J NO_x limit for all unit types except for manufactured home furnaces
- Manufactured home units represent approximately 6% of non-compliant unit sales in the Valley in 2020

Current Challenges to Furnace Manufacturers

- Manufacturers have been successful in developing furnace technologies that meet 14 ng/J NO_x limit for non-weatherized condensing and non-condensing units, including dual-fuel units, and weatherized units
 - Design of manufactured home furnaces is significantly different from ultra-low NO_x furnaces available for other structures
- New manufactured home gas furnaces subject to standards set by U.S. Department of Housing and Urban Development and U.S. Department of Energy



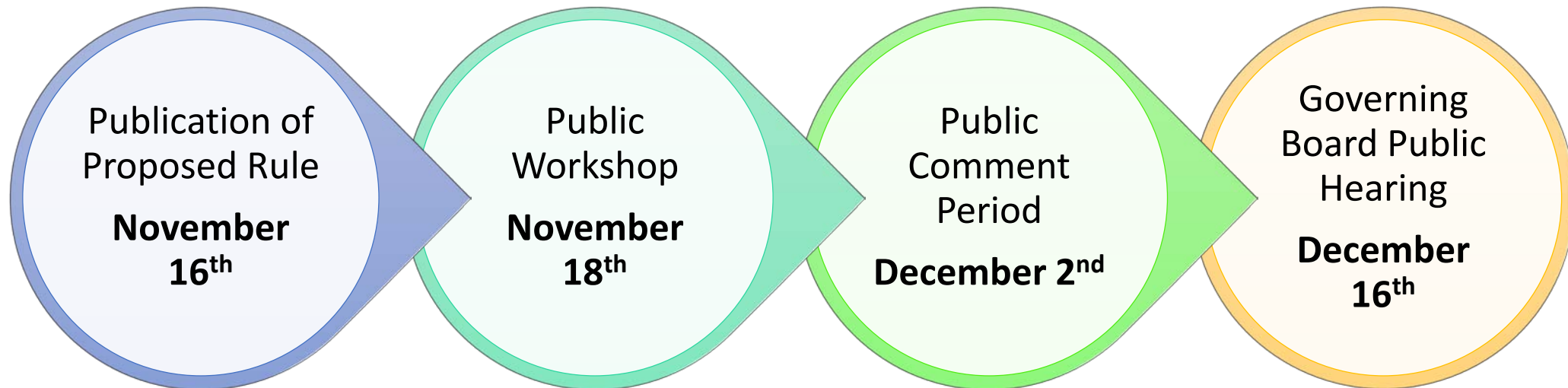
Current Challenges to Furnace Manufacturers (cont'd)

- COVID-19 impacts have delayed ability of manufacturers to develop compliant manufactured home units by Rule 4905 deadline of September 30, 2021
 - Supply chains affected
 - Labor shortage
- Manufacturers have requested additional time to develop compliant manufactured home units
 - Requesting 2-year extension consistent with recent South Coast AQMD amendment to Rule 1111

Rule 4905 Amendments Under Consideration

- District working closely with South Coast AQMD to address concerns raised by furnace manufacturers to develop manufactured home furnaces that comply with 14 ng/J NO_x limit
- Proposed amendments would extend emissions fee period for all size range manufactured home furnaces to September 30, 2023
 - Extension would provide the time necessary for compliant units to be developed and made commercially available
 - Extension would provide for continued availability of manufactured home furnaces to affordable housing market to address heating needs while new low-NO_x technologies are developed
 - No change to the emissions fee amount

Next Steps: Public Engagement Process for Rule 4905 Amendment



Public Participation and Comment Invited throughout Process

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Open Discussion

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